

CITY OF ATTLEBORO, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS

INTERSECTION IMPROVEMENTS ROUTE 123 AT RATHBUN-WILLARD DRIVE & BLACK OAK DRIVE JANUARY 2022



CITY COUNCIL OFFICERS

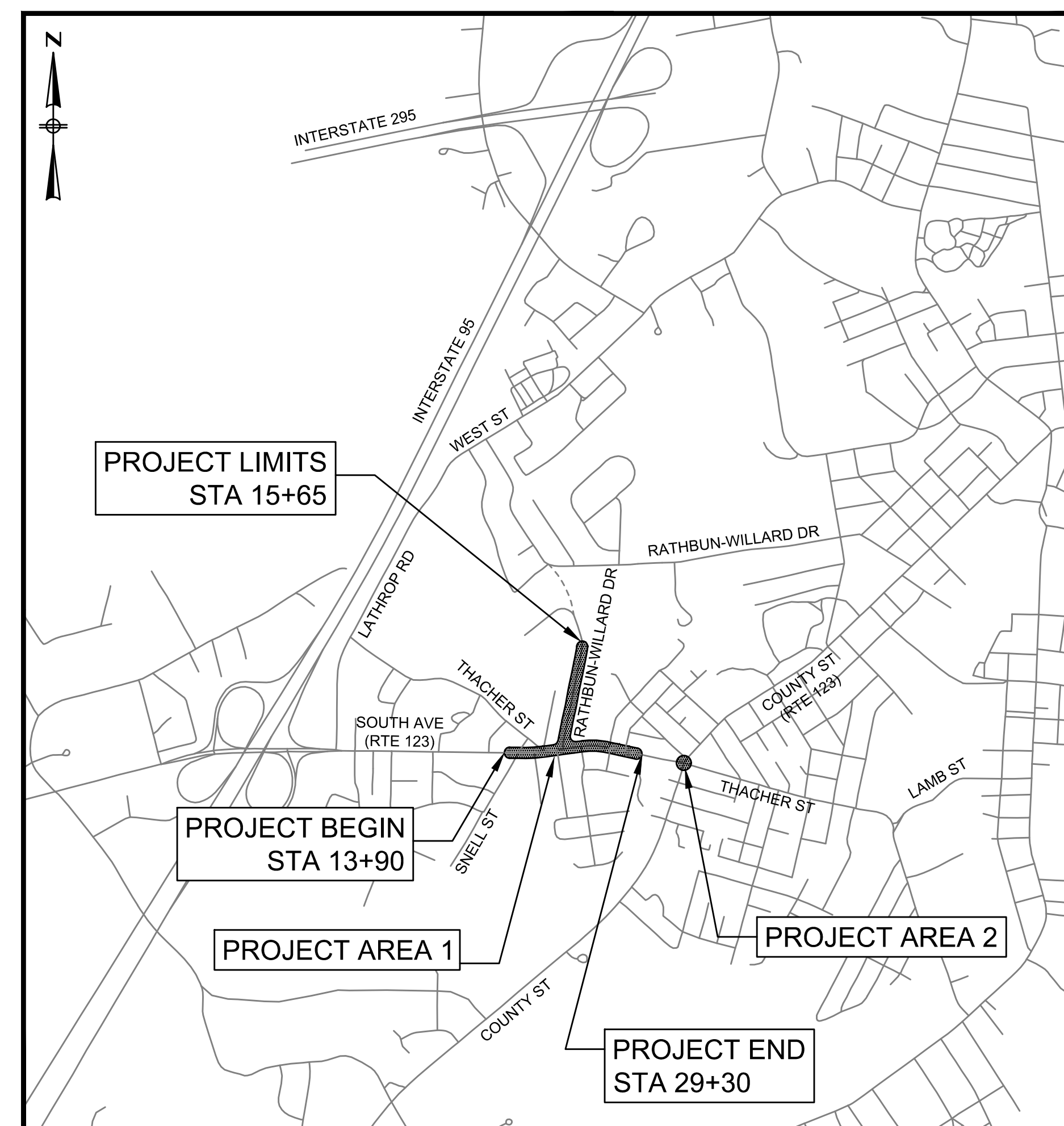
MARK J. COOPER, PRESIDENT
STEPHEN K. WITHERS, CITY CLERK

CITY MAYOR

PAUL HEROUX, MAYOR

PUBLIC WORKS

MICHAEL TYLER, SUPERINTENDENT
BOBBY ARAUJO, ASSISTANT SUPERINTENDENT



PROJECT LOCATION

PROJECT LOCATION

1" = 400'

PREPARED BY:



ISSUE DATE: JANUARY 12, 2022

PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
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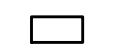


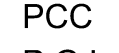




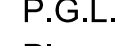









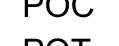

















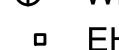
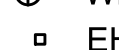
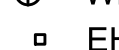





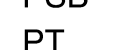




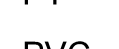






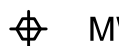
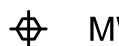
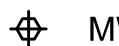
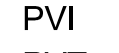











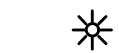
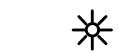
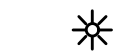
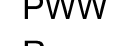




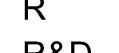






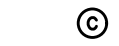
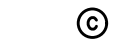
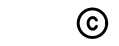






















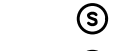
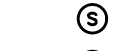
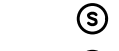


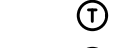
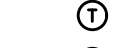
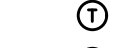






























REGISTERED PROFESSIONAL

1/12/22

DATE

1/11/2022 7:59 PM C:\710057167 - ATTLEBORO - ROUTE 123\DRAWING FILES\PLANSET\71571 LEGEND.DWG (MADOT-D.STB)

GENERAL SYMBOLS					PAVEMENT MARKINGS AND SIGNING SYMBOLS					ABBREVIATIONS					ABBREVIATIONS (cont.)				
EXISTING		PROPOSED		DESCRIPTION	EXISTING		PROPOSED		DESCRIPTION	GENERAL		GENERAL		GENERAL		GENERAL			
	JB		JB	JERSEY BARRIER		CB		CB	CATCH BASIN	AADT	ANNUAL AVERAGE DAILY TRAFFIC	PC	POINT OF CURVATURE		PCC	POINT OF COMPOUND CURVATURE			
	CB		CB	CATCH BASIN CURB INLET		FP		FP	FLAG POLE	ADJ	ADJUST	P.G.L.	PROFILE GRADE LINE		PI	POINT OF INTERSECTION			
	FP		GP	GAS PUMP		GP		GP	GAS PUMP	A.C.	ASPHALT CONCRETE	POC	POINT ON CURVE		POT	POINT ON TANGENT			
	GP		MB	MAIL BOX		MB		MB	MAIL BOX	ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	POT	POINT ON TANGENT		PRC	POINT OF REVERSE CURVATURE			
	MB			POST SQUARE					POST SQUARE	ALT	ALTERATION	PROJ	PROJECT		PROP	PROPOSED			
			WELL	WELL		WELL		WELL	WELL	BIT.	BITUMINOUS	PSB	PLANTABLE SOIL BORROW		PT	POINT OF TANGENCY			
	WELL		EHH	ELECTRIC HANDHOLE		EHH		EHH	ELECTRIC HANDHOLE	BL (or )	BASELINE	PT	POINT OF TANGENCY		PVC	POINT OF VERTICAL CURVATURE or POLY-VINYL -CHLORIDE-PIPE			
	EHH			FENCE GATE POST					FENCE GATE POST	BLDG	BUILDING	PVI	POINT OF VERTICAL INTERSECTION		PVT	POINT OF VERTICAL TANGENCY			
			GG	GAS GATE		GG		GG	GAS GATE	BOS	BOTTOM OF SLOPE	PVMT	PAVEMENT		PWW	PAVED WATER WAY			
	GG		BHL #	BORING HOLE		BHL #		BHL #	BORING HOLE	BOW	BOTTOM OF WALL	R	RADIUS OF CURVATURE		R&D	REMOVE AND DISPOSE			
	BHL #		MW #	MONITORING WELL		MW #		MW #	MONITORING WELL	BR.	BRIDGE	RCP	REINFORCED CONCRETE PIPE		RD	ROAD			
	MW #		TP #	TEST PIT		TP #		TP #	TEST PIT	BSW	BACK OF SIDEWALK	RDWY	ROADWAY		REM	REMOVE			
	TP #			HYDRANT					HYDRANT	CB	CATCH BASIN	RET	RETAIN		RET WALL	RETAINING WALL			
				LIGHT POLE					LIGHT POLE	CBCI	CATCH BASIN WITH CURB INLET	ROW	RIGHT OF WAY		RR	RAILROAD			
			CO.BD.	COUNTY BOUND					COUNTY BOUND	CLF	CHAIN LINK FENCE	R&R	REMOVE AND RESET		R&S	REMOVE AND STACK			
	CO.BD.			GPS POINT					GPS POINT	CL	CENTERLINE	RT	RIGHT		SB	STONE BOUND			
				CABLE MANHOLE					CABLE MANHOLE	CMP	CORRUGATED METAL PIPE	SD	SUBDRAIN		SHLD	SHOULDER			
				DRAINAGE MANHOLE					DRAINAGE MANHOLE	CPP	CORRUGATED PLASTIC PIPE	SHT	SHEET		SMH	SEWER MANHOLE			
				ELECTRIC MANHOLE					ELECTRIC MANHOLE	CSP	CORRUGATED STEEL PIPE	SP	STRAIN POLE		ST	STREET			
				GAS MANHOLE					GAS MANHOLE	CO.	COUNTY	STA	STATION		SSD	STOPPING SIGHT DISTANCE			
				MISC MANHOLE					MISC MANHOLE	CONC	CONCRETE	SHLO	STATE HIGHWAY LAYOUT LINE		SW	SIDEWALK			
				SEWER MANHOLE					SEWER MANHOLE	COND	CONDUIT	T	TANGENT DISTANCE OF CURVE/TRUCK %		TAN	TANGENT			
				TELEPHONE MANHOLE					TELEPHONE MANHOLE	CONT	CONTINUOUS	TEMP	TEMPORARY		TC	TOP OF CURB			
				WATER MANHOLE					WATER MANHOLE	CONST	CONSTRUCTION	TOS	TOP OF SLOPE		TOW	TOP OF WALL			
			MHB	MASSACHUSETTS HIGHWAY BOUND		MHB		MHB	MASSACHUSETTS HIGHWAY BOUND	CR GR	CROWN GRADE	TS	TRAFFIC SIGNAL		TSV&B	TAPPING SLEEVE, VALVE AND BOX			
	MHB			MONUMENT					MONUMENT	DHV	DESIGN HOURLY VOLUME	TYP	TYPICAL		UP	UTILITY POLE			
				STONE BOUND					STONE BOUND	DI	DROP INLET	UPL	UTILITY POLE w/ LIGHT		VAR	VARIES			
				TOWN OR CITY BOUND					TOWN OR CITY BOUND	DIA	DIAMETER	VERT	VERTICAL		VC	VERTICAL CURVE			
				TRAVERSE OR TRIANGULATION STATION					TRAVERSE OR TRIANGULATION STATION	DIP	DUCTILE IRON PIPE	VCP	VITRIFIED CLAY PIPE		VGC	VERTICAL GRANITE CURB			
			TPL or GUY	TROLLEY POLE OR GUY POLE															

GENERAL NOTES

1.

HORIZONTAL CONTROL, IN FEET, IS BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD 83). THE VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2.

SURVEY PLAN HAS BEEN PREPARED BY BAYSIDE ENGINEERING, INC. THE CONTRACTOR SHALL VERIFY BASEPLAN INFORMATION SHOWN ON THE PLANS TO ENSURE THAT CONSTRUCTION CAN PROCEED AS INTENDED.
3.

THE LOCATION OF SUBSURFACE UTILITIES SHOWN IS APPROXIMATE AND NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITY LINES AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO ANY EXCAVATION, DEMOLITION OR EXPLOSION WORK IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT-OF-WAY OR EASEMENT.
4.

THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
5.

JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSAND.
6.

PROPOSED SIDEWALKS AND WHEELCHAIR RAMPS SHALL BE CONSTRUCTED TO THE NEAREST SCORE LINE OR EXPANSION JOINT IN THE EXISTING ADJACENT WALK SURFACE AS DIRECTED BY THE ENGINEER.
7.

CONTRACTOR SHALL VERIFY LOCATION OF ALL OBJECTS (SIGNS, TREES, GRATE, POLES ETC.) TO BE SET WITHIN SIDEWALK PRIOR TO FINAL PLACEMENT TO PROVIDE A MINIMUM CLEAR PATH OF 36" EXCLUDING THE CURB. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LOCATION WHICH CANNOT MEET THE CLEARANCE REQUIREMENTS.
8.

SIGNS, POLES AND OTHER FEATURES LOCATED IN PROPOSED CEMENT CONCRETE SIDEWALK SHALL BE BOXED AND PROVIDED FLEXIBLE JOINT FILLER.
9.

IN AREAS OF NEW SIDEWALK, NEW EDGE OF PAVEMENT OR CURB WITHOUT SIDEWALK OR ANY WORK ADJACENT TO EXISTING GRASS AREAS, EVEN WHEN NO SLOPE-MATCHING OR GRADING IS NECESSARY AND THE EXISTING GRADE IS MET, LOAM BORROW AND SEED SHALL BE PROVIDED AS NECESSARY TO REPAIR AND COMPLETE ANY DAMAGE TO THE GRADE CAUSED BY THE CONSTRUCTION PROCESS.
10.

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS SHALL BE IN ACCORDANCE WITH MASSDOT REQUIREMENTS AND THE LATEST VERSION OF THE MUTCD.
11.

WHEN WORKING NEXT TO EXISTING WALLS, BERMS, AND OTHER STRUCTURES, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING STRUCTURES. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
12.

TOPOGRAPHICAL FEATURES WITHIN THE PROJECT LIMITS ARE TO BE RETAINED UNLESS OTHERWISE NOTED ON THE PLANS

PAVEMENT NOTES

MILLING AND OVERLAY

SURFACE COURSE

1 3/4" PAVEMENT FINE MILLING
1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS

SURFACE:

4" CEMENT CONCRETE WALK SURFACE
4000 PSI, 3/4", 610 OVER

FOUNDATION:

8" GRAVEL BORROW, TYPE b

HMA DRIVEWAY

SURFACE:

1 1/2" HMA SURFACE COURSE OVER
2 1/2" HMA INTERMEDIATE COURSE OVER

FOUNDATION:

8" GRAVEL BORROW, TYPE b

HMA SIDEWALK

SURFACE:

3" HMA WALK SURFACE PLACED IN TWO EQUAL LAYER

FOUNDATION:

8" GRAVEL BORROW, TYPE b

FULL DEPTH CONSTRUCTION

SURFACE COURSE:

1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

INTERMEDIATE COURSE:

1 3/4" SUPERPAVE INTERMEDIATE COURSE COURSE 12.5 (SIC-12.5)

BASE COURSE:

4" SUPERPAVE BASE COURSE 25.0 (SBC-25.0)

SUB BASE:

12" GRAVEL BORROW TYPE b

BOX WIDENING 4.0 FEET OR LESS

SURFACE COURSE:

1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

INTERMEDIATE COURSE:

1 3/4" SUPERPAVE INTERMEDIATE COURSE COURSE 12.5 (SIC-12.5)

BASE COURSE:

6" HES CEMENT CONCRETE BASE, 3000 PSI 1-1/2", 470 CEM. CONC.

SUB BASE:

8" GRAVEL BORROW TYPE b

CEMENT CONCRETE DRIVEWAY APRON

SURFACE:

6" CEMENT CONCRETE
(AIR ENTRAINED 4000 PSI, 3/4", 610)

BASE COURSE:

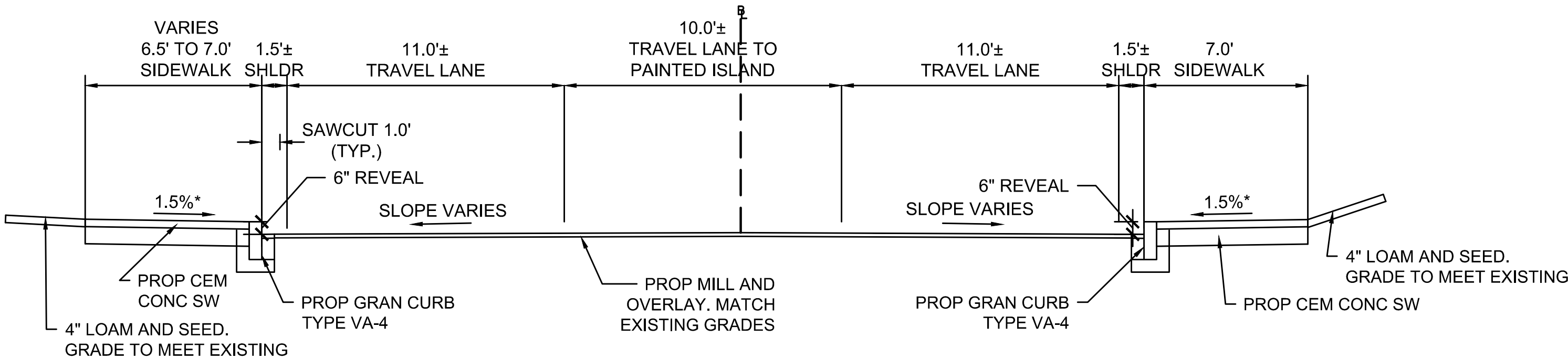
8" GRAVEL BORROW TYPE b
4000 PSI, 3/4", 610 OVER

PAVEMENT NOTES

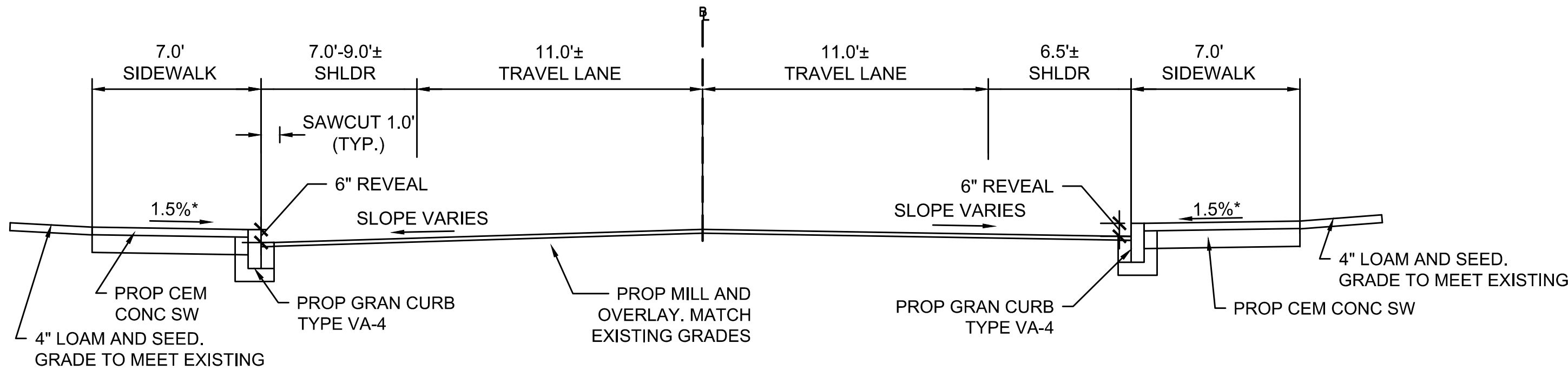
1.

ALL HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE INSTALLED PER SECTION 450.
2.

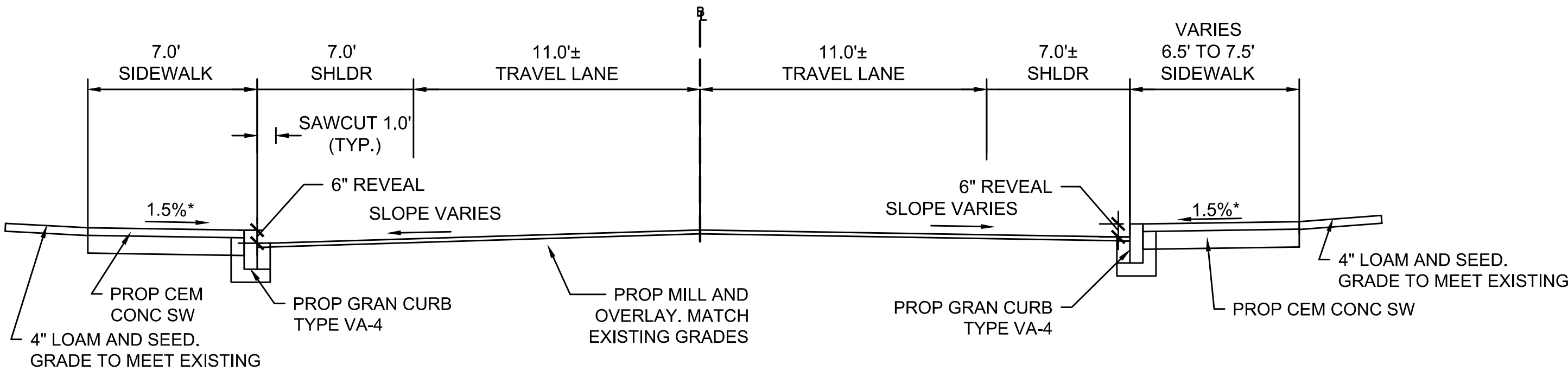
TACK COAT SHALL BE APPLIED FOR UNIFORM COVERAGE OF 90% AT RATE OF 0.07 GALLONS PER SQUARE YARD FOR MILLED SURFACES AND 0.05 GALLONS PER SQUARE YARD FOR MILLED SURFACES AND 0.05 GALLONS PER SQUARE YARD FOR SMOOTH TIGHT PAVED SURFACES.



TYPICAL SECTION: ROUTE 123
HOBBS TO RATHBUN-WILLARD
NOT TO SCALE




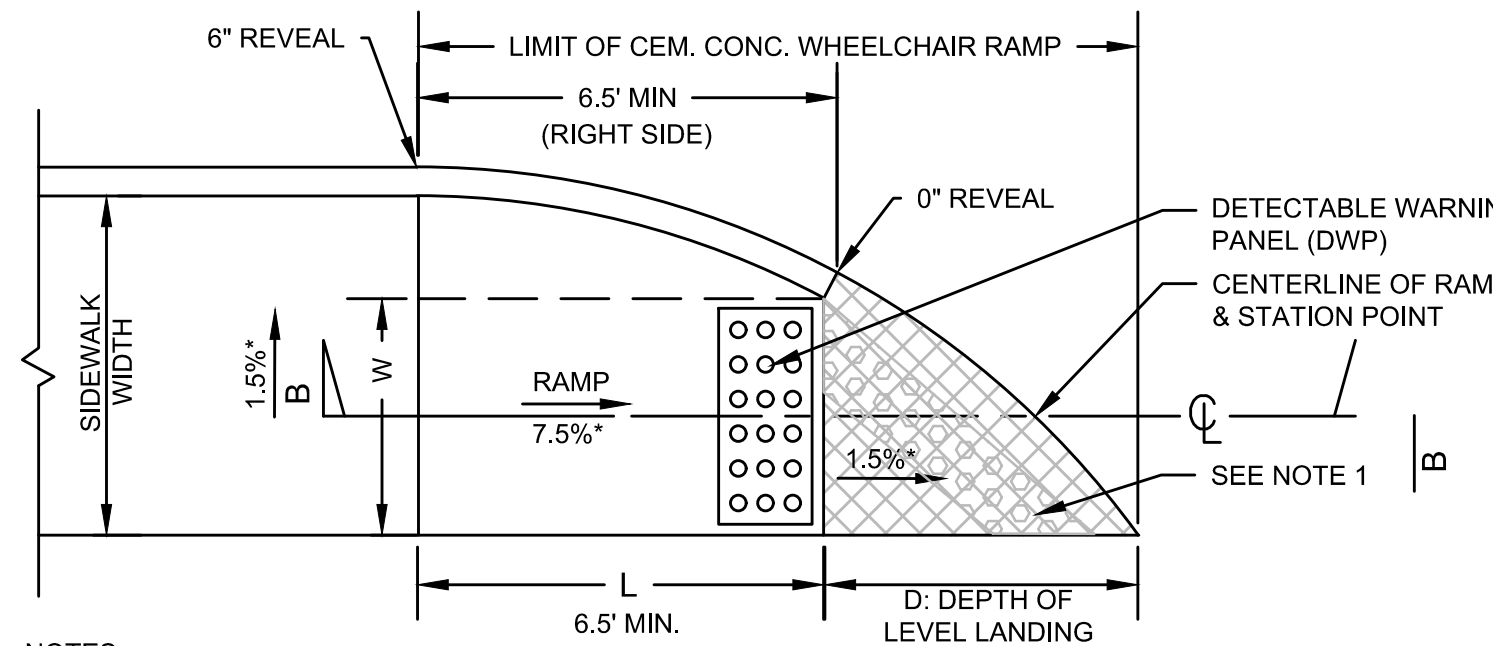
TYPICAL SECTION: ROUTE 123
GREENHILL AVE TO PRIMROSE
NOT TO SCALE



TYPICAL SECTION: RATHBUN WILLARD
NOT TO SCALE

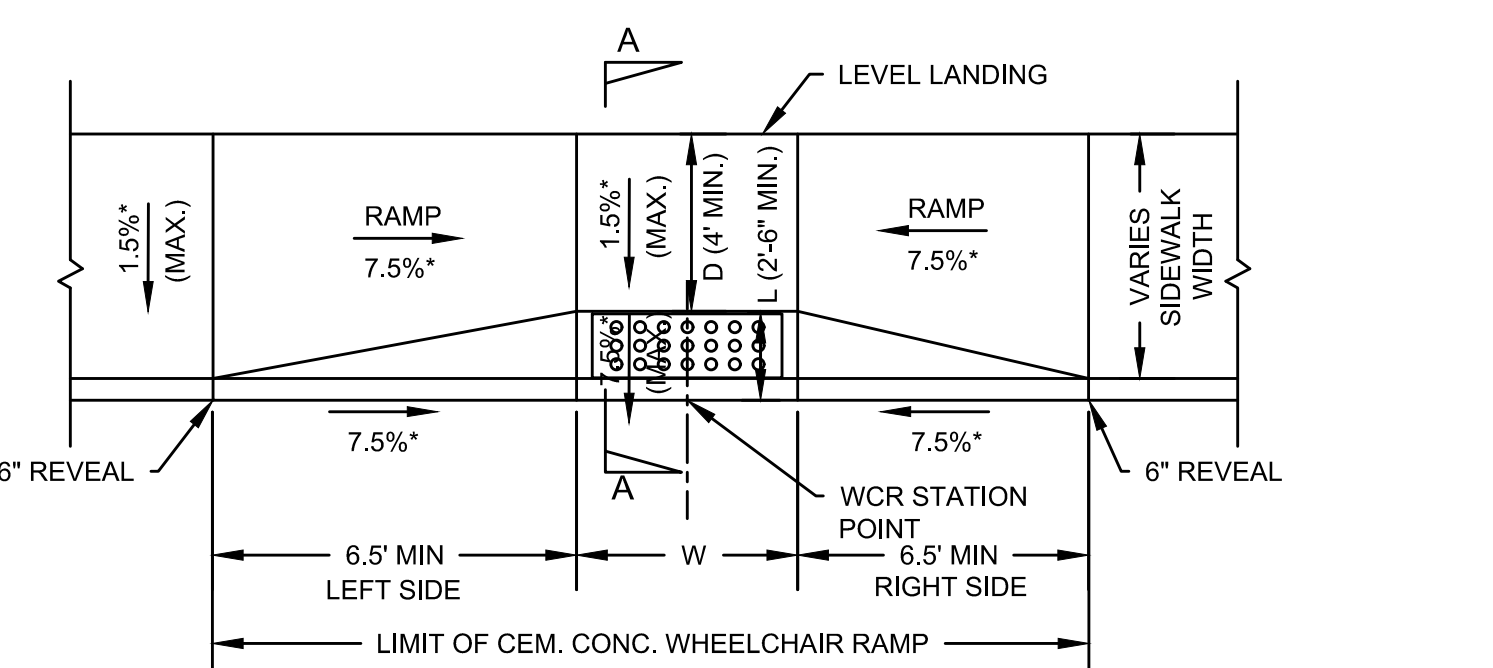
* TOLERANCE FOR CONSTRUCTION ±0.5%

						DRAWN BY: KYL	REGISTERED PROFESSIONAL	PREPARED BY  www.BETA-Inc.com	SUBCONSULTANT	SCALE NONE <small>UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION</small>	TITLE Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts GENERAL NOTES & TYPICAL SECTIONS	BETA JOB NO. 7157
						DESIGNED BY: KYL						ISSUE DATE 11/10/2021
						CHECKED BY: DJ						SHEET NO. 3 of 28
NUMBER	DATE	MADE BY	CHECKED BY		REVISIONS							



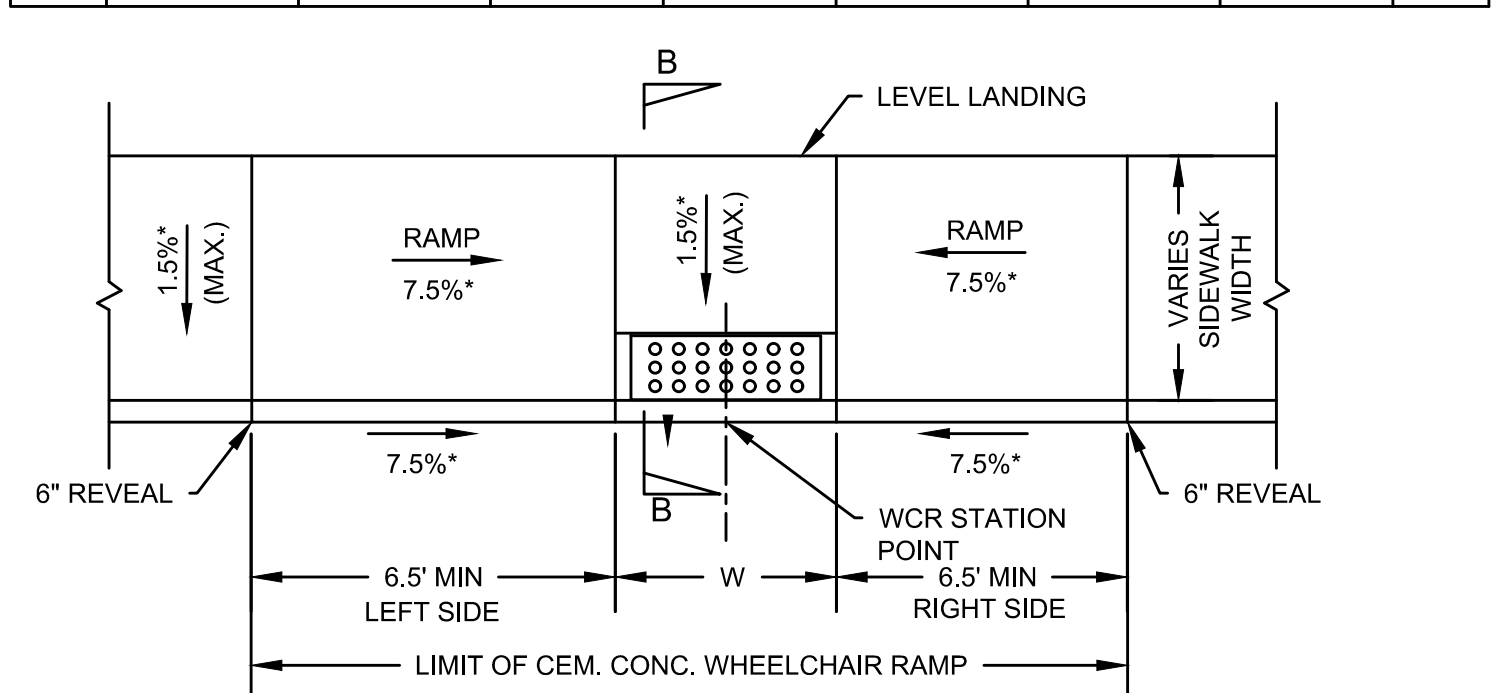
NOTES
1. WHEN EITHER CORNER OF DETECTABLE WARNING PANEL IS 5 FEET OR MORE FROM THE GUTTER LINE, THE PANEL SHOULD BE INSTALLED AT THE LEVEL LANDING

WHEELCHAIR RAMP TYPE "A"
NOT TO SCALE

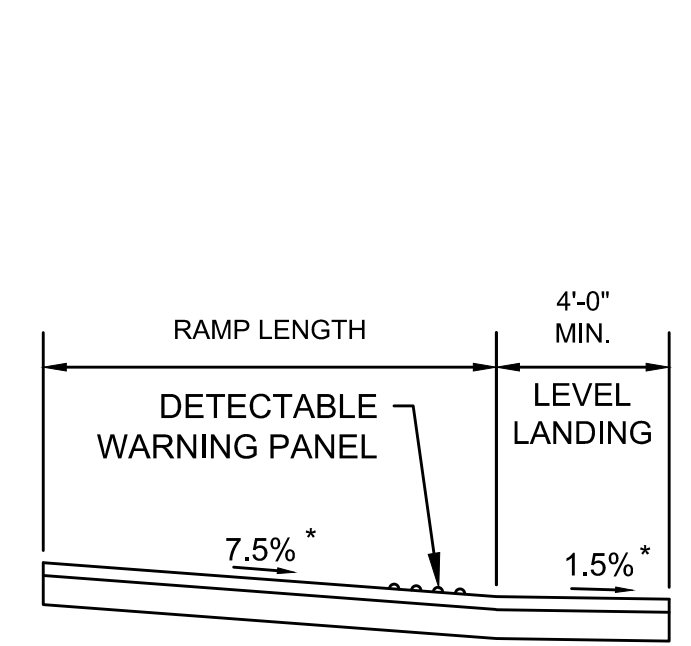


WHEELCHAIR RAMP TYPE "B"
NOT TO SCALE

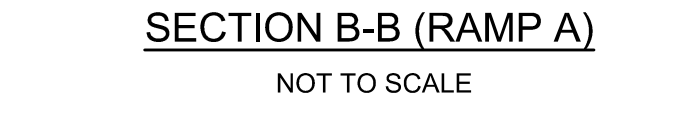
WHEELCHAIR RAMP DATA							
WCR NO.	SLOPE AT GUTTER (%)	LENGTH OF PRIMARY RAMP (L')	WIDTH OF RAMP W	DEPTH OF LEVEL LANDING D	TRANSITION LENGTH: LEFT*	TRANSITION LENGTH: RIGHT*	WCR TYPE
1	-1.53%	2'-6"	5'-0"	4'-6"	9'-0"	6'-6"	7'-0"
2	2.34%	2'-6"	4'-6"	6'-6"	6'-6" (3" REV)	11'-0"	7'-0"
3	1.86%	2'-6"	5'-0"	4'-6"	6'-6"	11'-0"	7'-0"
4	-3.07%	4'-0"	5'-0"	5'-0"	14'-0"	7'-6"	7'-0" - 9'-6"
5	1.87%	3'-6"	5'-0"	5'-2"	7'-6"	6'-6"	7'-0"
6	1.79%	2'-6"	4'-6"	4'-0"	6'-6"	9'-0"	7'-0"
7	0.26%	7'-8"	5'-0"	3'-6"	N/A	7'-8"	7'-0"
8	0.43%	6'-6"	5'-0"	5'-6"	6'-6"	N/A	6'-0"
9	-1.19%	9'-0"	5'-0"	2'-3"	9'-0"	N/A	7'-0"
10	-2.25%	6'-6"	5'-0"	0'-6"	N/A	6'-6"	6'-6"
11	6.36%	N/A	5'-0"	6'-0"	N/A	15'-0"	6'-0"
12	-3.63%	5'-6"	5'-0"	5'-6"	14'-0"	6'-6"	5'-6"
13	3.80%	5'-6"	5'-0"	5'-6"	14'-0"	14'-0"	5'-6"
14	-6.87%	N/A	4'-0"	7'-4"	15'-0"	6'-6"	6'-0"
15	0.28%	3'-0"	5'-0"	4'-0"	6'-6"	7'-8"	7'-0"
16	2.59%	3'-0"	5'-8"	4'-0"	6'-6"	11'-0"	7'-0"
17	1.21%	9'-0"	5'-0"	7'-2"	N/A	9'-0"	7'-0"
18	-1.72%	9'-0"	5'-0"	7'-8"	9'-0"	N/A	7'-0"
19	-2.04%	11'-0"	5'-6"	3'-6"	11'-0"	N/A	7'-0"
20	0.37%	7'-8"	5'-0"	2'-4"	N/A	7'-8"	7'-0"
21	1.26%	6'-6"	5'-0"	7'-4"	6'-6"	N/A	5'-6"
22	1.21%	9'-0"	4'-0"	6'-0"	N/A	9'-0"	6'-0"
23	0.19%	6'-6"	5'-0"	4'-0"	6'-6"	N/A	7'-0"
24	-0.13%	6'-6"	5'-0"	6'-6"	N/A	6'-6"	7'-0"
25	0.17%	2'-6"	5'-0"	5'-0"	6'-6"	7'-8"	7'-0"
26	0.36%	6'-6"	5'-0"	7'-3"	6'-6"	N/A	7'-0"
27	N/A	8'-0"	7'-0"	4'-0"	6'-6"	9'-0"	7'-0"
28	N/A	8'-0"	10'-0"	4'-0"	7'-8"	6'-6"	N/A



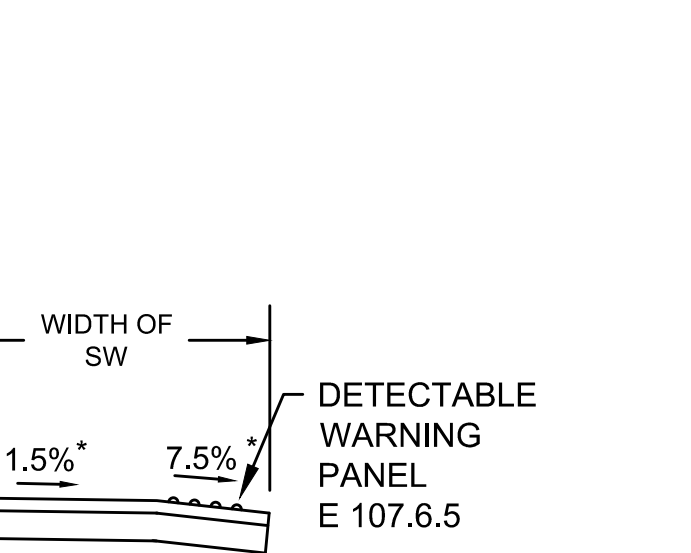
WHEELCHAIR RAMP TYPE "H"
NOT TO SCALE



SECTION B-B (RAMP A)
NOT TO SCALE



SECTION A-A (RAMP C, B)
NOT TO SCALE



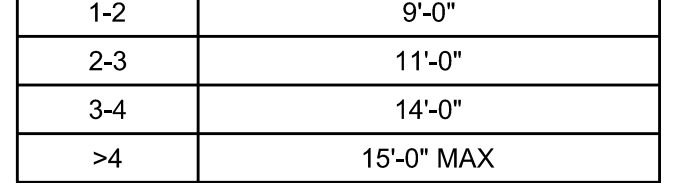
WHEELCHAIR RAMP TYPE "C"
NOT TO SCALE

TABLE 1	
PROFILE GRADE (%)	HIGH SIDE TRANSITION LENGTH FOR 7.5% DESIGN SLOPE (FT)*
0	6'-6"
0-1	7'-8"
1-2	9'-0"
2-3	11'-0"
3-4	14'-0"
>4	15'-0" MAX

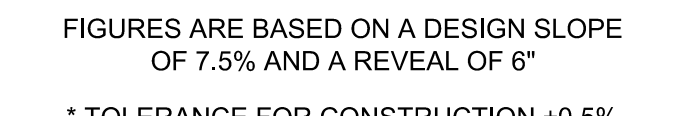
WHEELCHAIR RAMP & DRIVEWAY
HIGH SIDE TRANSITION LENGTHS

FIGURES ARE BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"

* TOLERANCE FOR CONSTRUCTION ±0.5%



WHEELCHAIR RAMP TYPE "D"
NOT TO SCALE



WHEELCHAIR RAMP TYPE "E"
NOT TO SCALE



WHEELCHAIR RAMP TYPE "F"
NOT TO SCALE



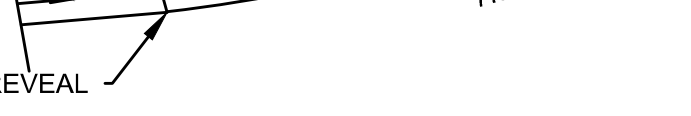
WHEELCHAIR RAMP TYPE "G"
NOT TO SCALE



WHEELCHAIR RAMP TYPE "H"
NOT TO SCALE



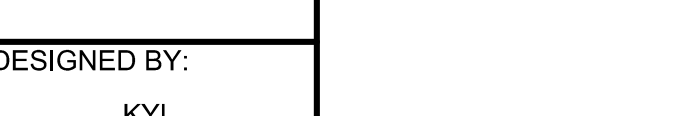
WHEELCHAIR RAMP TYPE "I"
NOT TO SCALE



WHEELCHAIR RAMP TYPE "J"
NOT TO SCALE



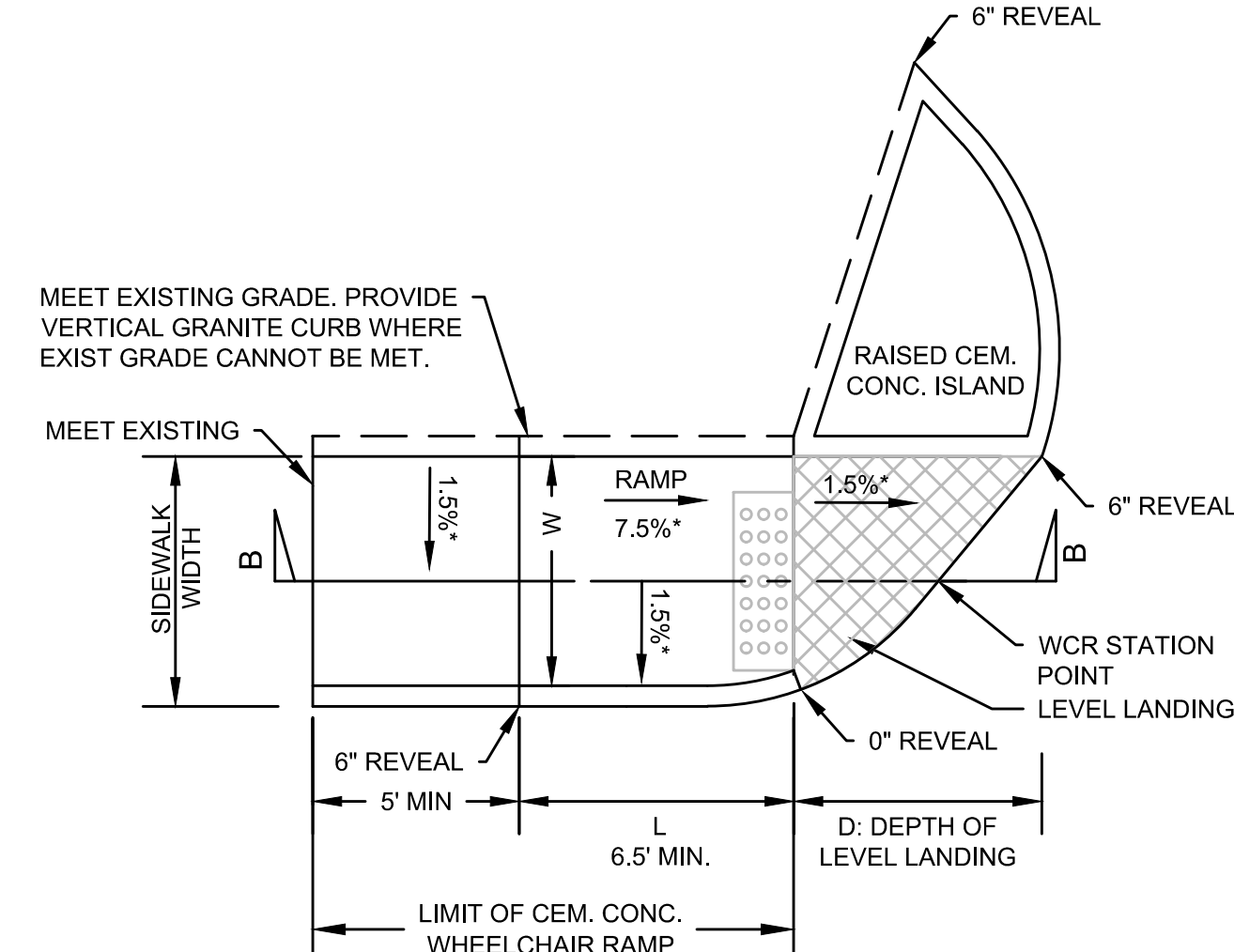
WHEELCHAIR RAMP TYPE "K"
NOT TO SCALE



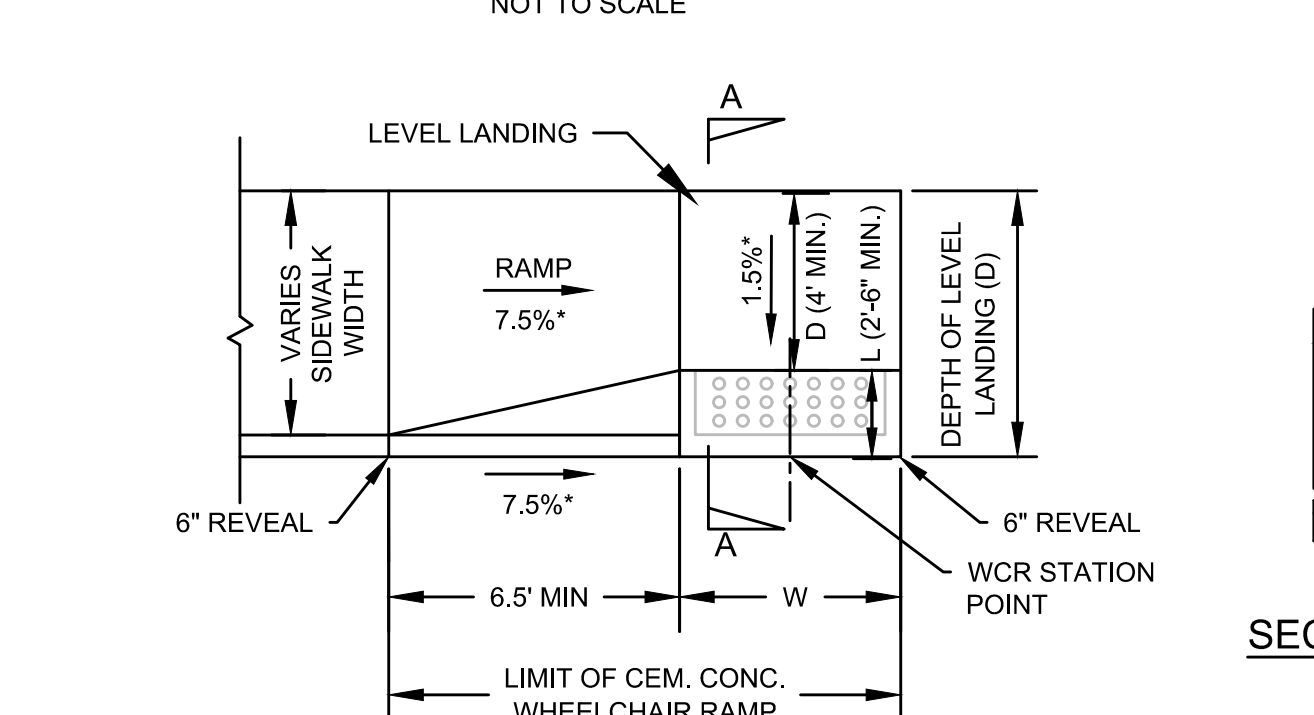
WHEELCHAIR RAMP TYPE "L"
NOT TO SCALE



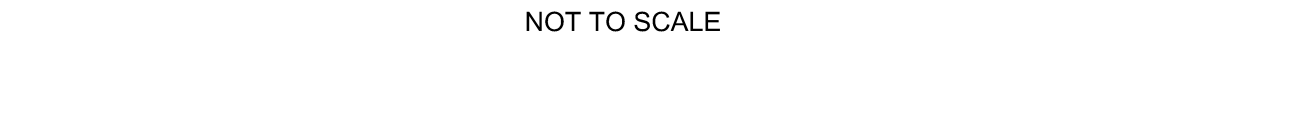
WHEELCHAIR RAMP TYPE "M"
NOT TO SCALE



WHEELCHAIR RAMP TYPE "D"
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



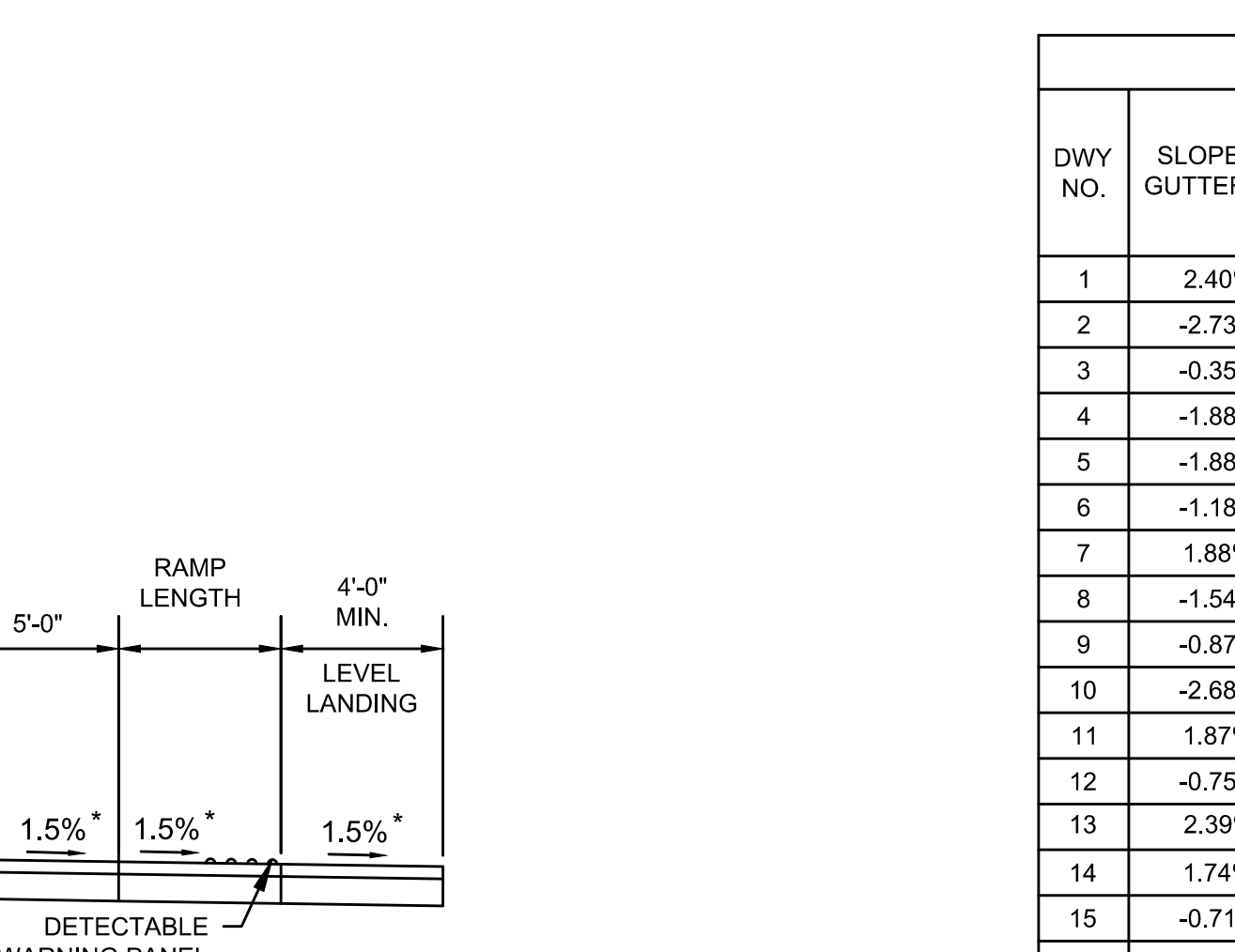
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NOT TO SCALE



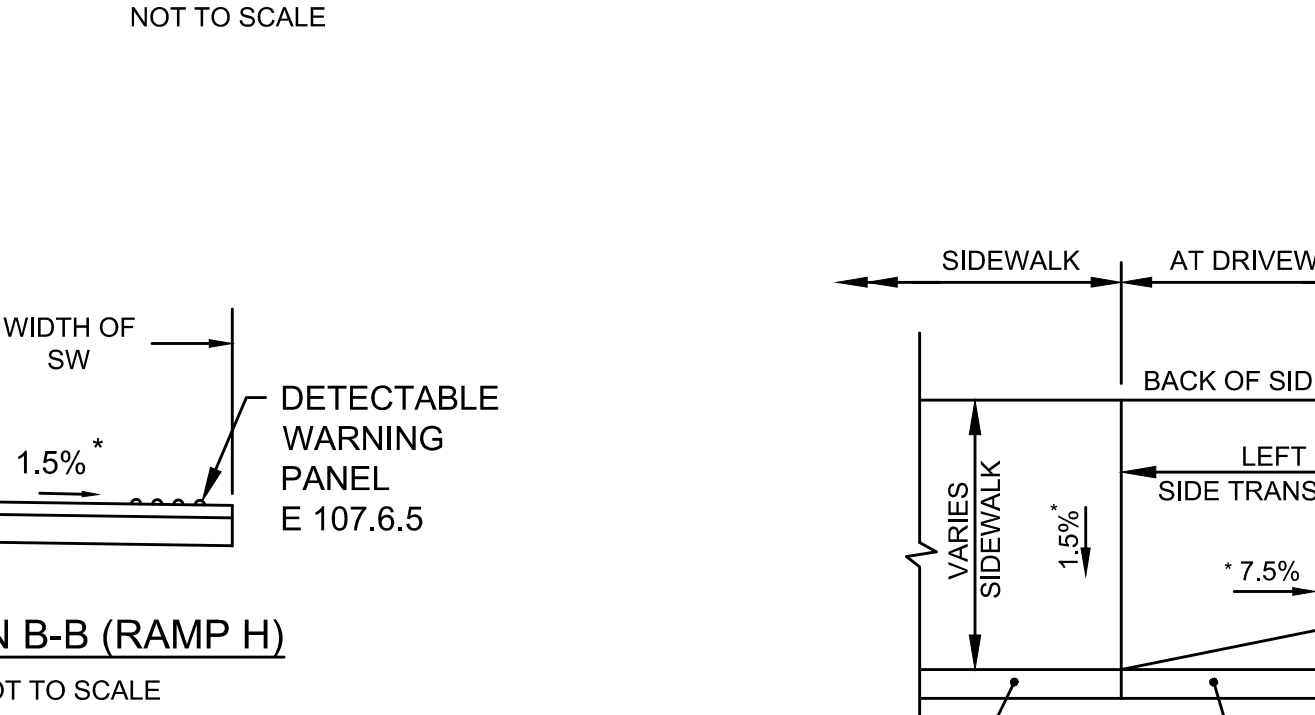
SECTION B-B (RAMP H)
NOT TO SCALE



SECTION B-B (RAMP H)
NOT TO SCALE



WHEELCHAIR RAMP TYPE "D"
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



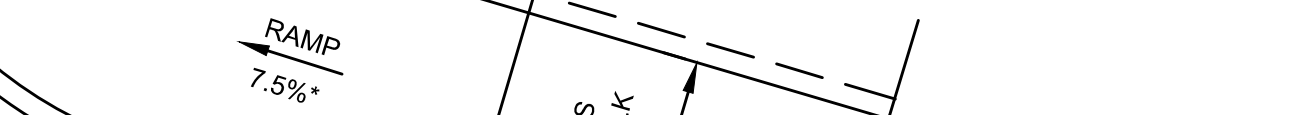
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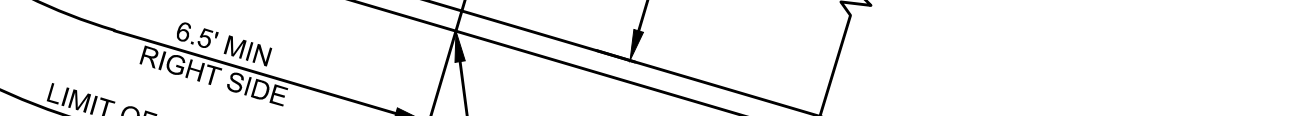
SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE

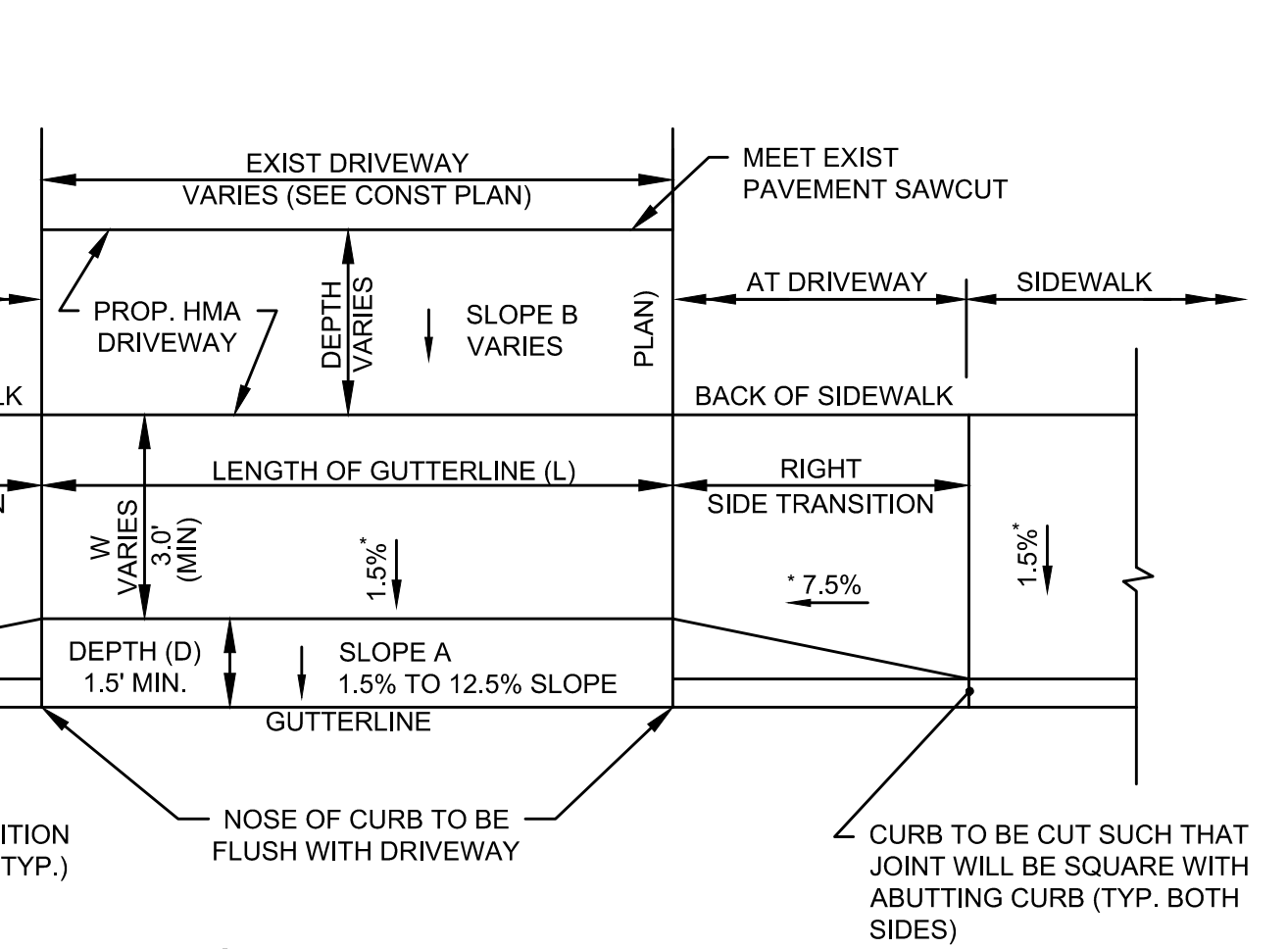


SECTION B-B (RAMP D)
NOT TO SCALE



SECTION B-B (RAMP D)
NOT TO SCALE

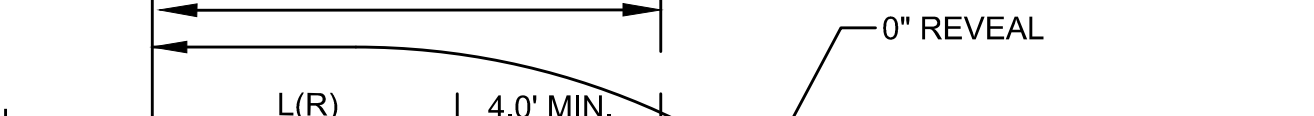
DRIVEWAY DATA								
DWY NO.	SLOPE AT GUTTER (%)	LENGTH OF GUTTERLINE (L)	DEPTH OF GUTTER TO FRONT OF SIDEWALK (D)	PATH OF TRAVEL WIDTH (W)	TRANSITION LENGTH: LEFT*	TRANSITION LENGTH: RIGHT*	SIDEWALK WIDTH	DWY TYPE
1	2.40%	20'-0"	2'-0"	5'-0"	6'-6"	11'-0"	6'-8"	A
2	-2.73%	12'-0"	2'-6"	4'-6"	11'-0"	6'-6"	7'-0"	A
3	-0.35%	16'-0"	2'-0"	5'-0"	7'-8"	6'-6"	7'-0"	A
4	-1.88%	10'-6"	2'-0"	4'-6"	9'-0"	6'-6"	6'-0" - 7'-0"	A
5	-1.88%	11'-6"	2'-6"	4'-6"	9'-0"	6'-6"	6'-6"	A
6	-1.18%	25'-0"	2'-0"	5'-0"	9'-0"	6'-6"	7'-0"	A
7	1.88%	16'-0"	2'-0"	5'-0"	9'-0"	6'-6"	7'-0"	A
8	-1.54%	20'-3"	2'-0"	5'-0"	9'-0"	6'-6"	7'-0"	A
9	-0.87%	15'-6"	2'-0"	5'-0"	7'-8"	6'-6"	7'-0"	A
10	-2.68%	20'-6"	2'-0"	5'-0"	11'-0"	6'-6"	7'-0"	A
11	1.87%	18'-0"	2'-0"	5'-0"	6'-6"	9'-0"	7'-0"	A
12	-0.75%	16'-3"	2'-0"	3'-6"	7'-8"	6'-6"	6'-0"	A
13	2.39%	23'-0"	2'-0"	3'-6"	6'-6"	11'-0"	6'-0"	A
14	1.74%	21'-6"	2'-0"	5'-6"	6'-6"	9'-0"	7'-6"	A
15	-0.71%	37'-6"	2'-0"	5'-0"	7'-8"	6'-6"	7'-0"	A
16	0.26%	34'-6"	2'-0"	5'-0"	7'-8"	6'-6"	7'-0"	A
17	0.40%	23'-6"	2'-0"	5'-6"	6'-6"	7'-8"	7'-6"	A



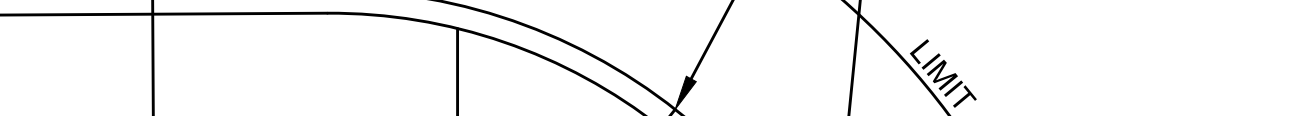
TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



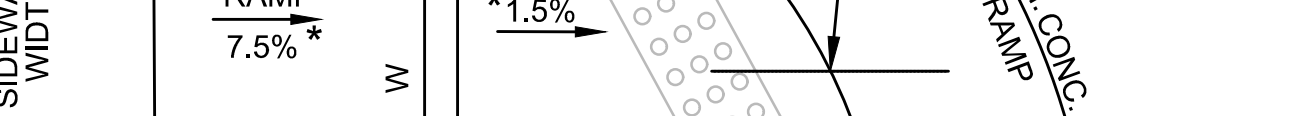
TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



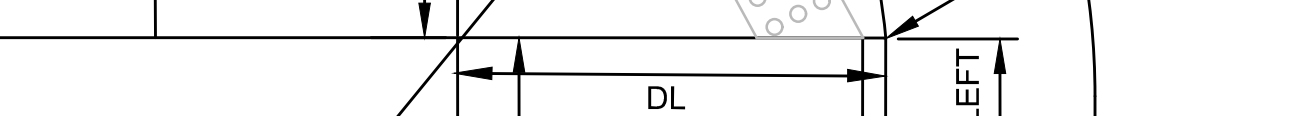
TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



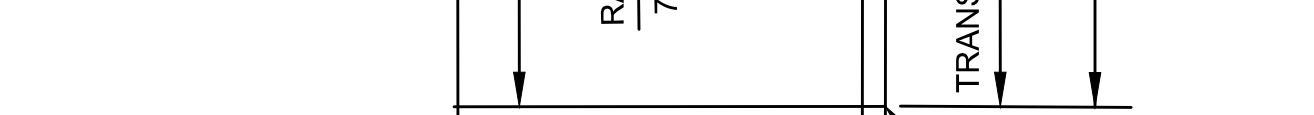
TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



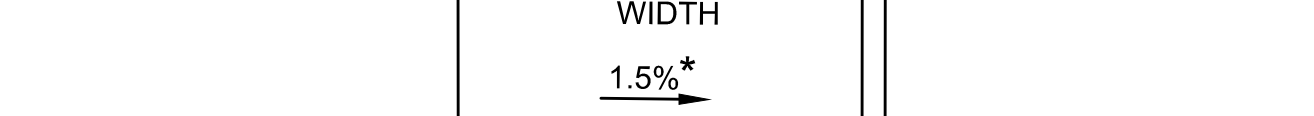
TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



TYPICAL DRIVEWAY TYPE A
NOT TO SCALE

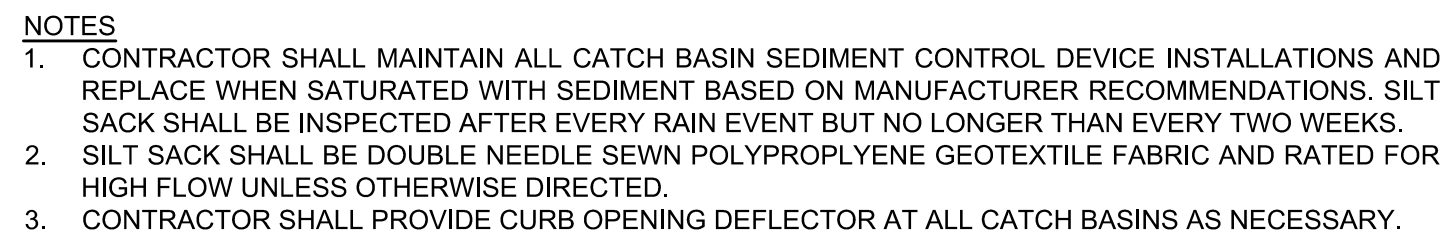
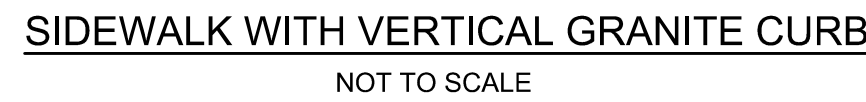


TYPICAL DRIVEWAY TYPE A
NOT TO SCALE



TYPICAL DRIVEWAY TYPE A
NOT TO SCALE





CATCH BASIN SEDIMENT CONTROL PROTECTION
NOT TO SCALE



- NOTE:
1. VERTICAL CURBING SHALL BE INSTALLED AS SHOWN ON THE SITE PLAN.
 2. PROVIDE CURB EXPANSION JOINTS AT 5'-0" O.C.
 3. CURB REPLACEMENT IN EXISTING PAVEMENT - SAWCUT EDGE MIN. 12" FROM CURB.
 4. CONCRETE CURB - PROVIDE 1" CHAMFER OF EDGE ALONG PAVEMENT SIDE FACE.


CURB INSTALLATION
NOT TO SCALE



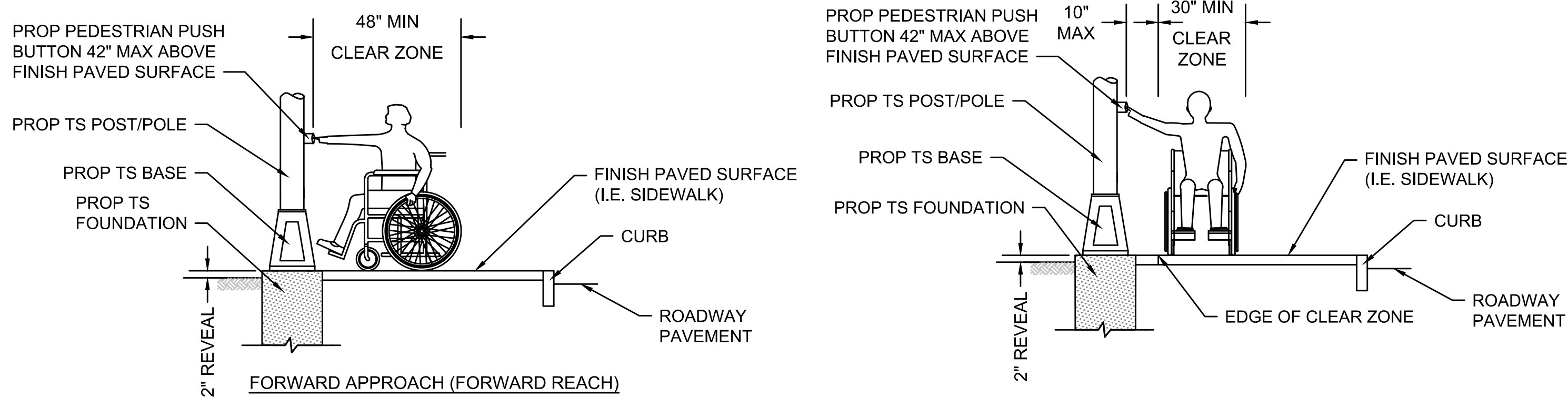
- NOTES**
1. MINIMUM CLEAR PATH ON ALL SIDEWALKS SHALL BE 36 INCHES, EXCLUDING THE CURB.
 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL OBJECTS (SIGNS, POLES, ETC.) TO BE SET WITHIN SIDEWALK PRIOR TO FINAL PLACEMENT TO PROVIDE A MINIMUM CLEAR PATH OF 36 INCHES NOT INCLUDING CURB. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LOCATION WHICH CANNOT MEET THE CLEARANCE REQUIREMENTS.

* TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

MIN. SIDEWALK CLEARANCE
NOT TO SCALE

					DRAWN BY: KYL	REGISTERED PROFESSIONAL	PREPARED BY	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO. 7157				
					DESIGNED BY: KYL	 www.BETA-Inc.com			NONE	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts CONSTRUCTION DETAILS	ISSUE DATE 11/10/2021				
					CHECKED BY: DJ										SHEET NO. 5 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS											

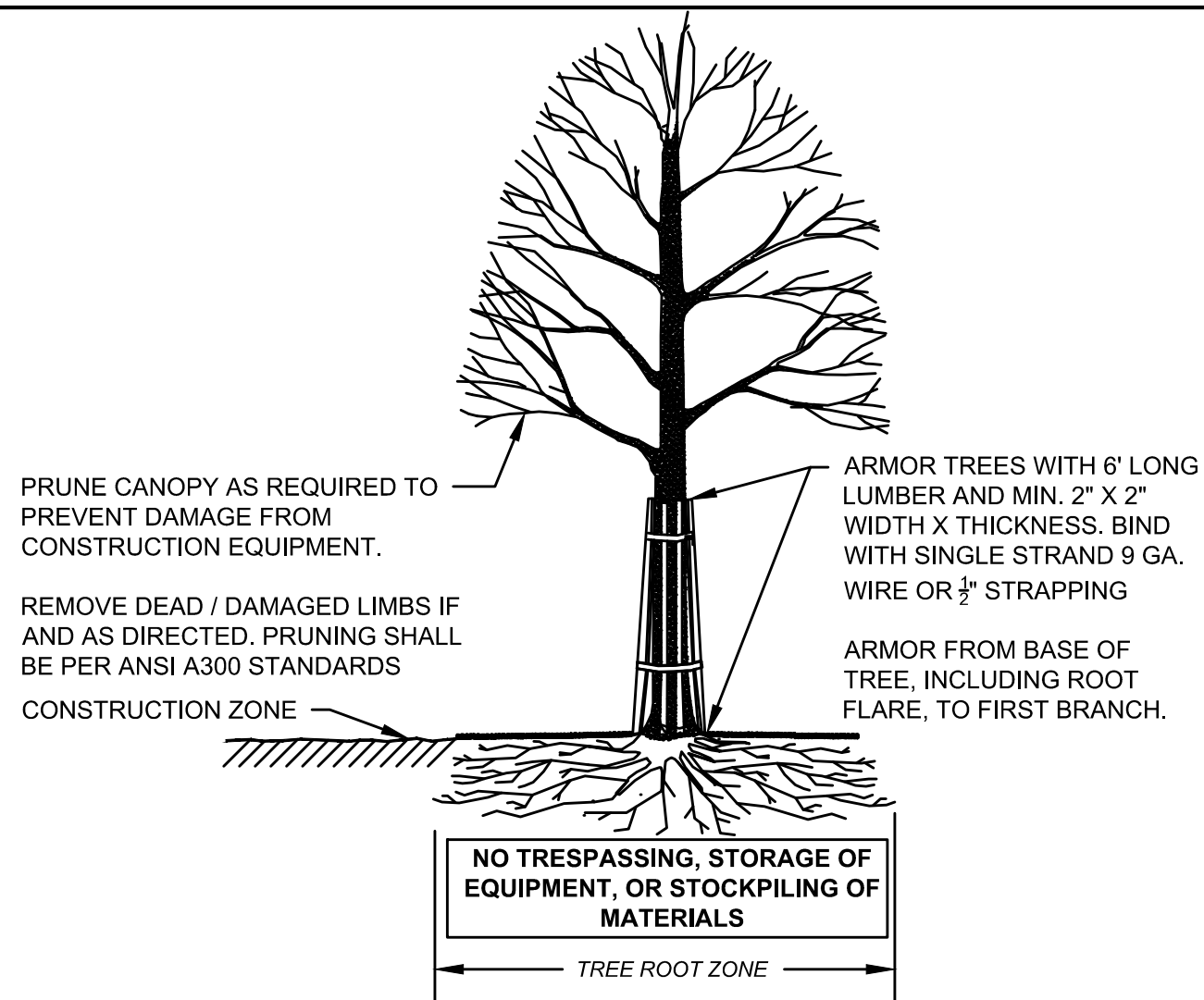
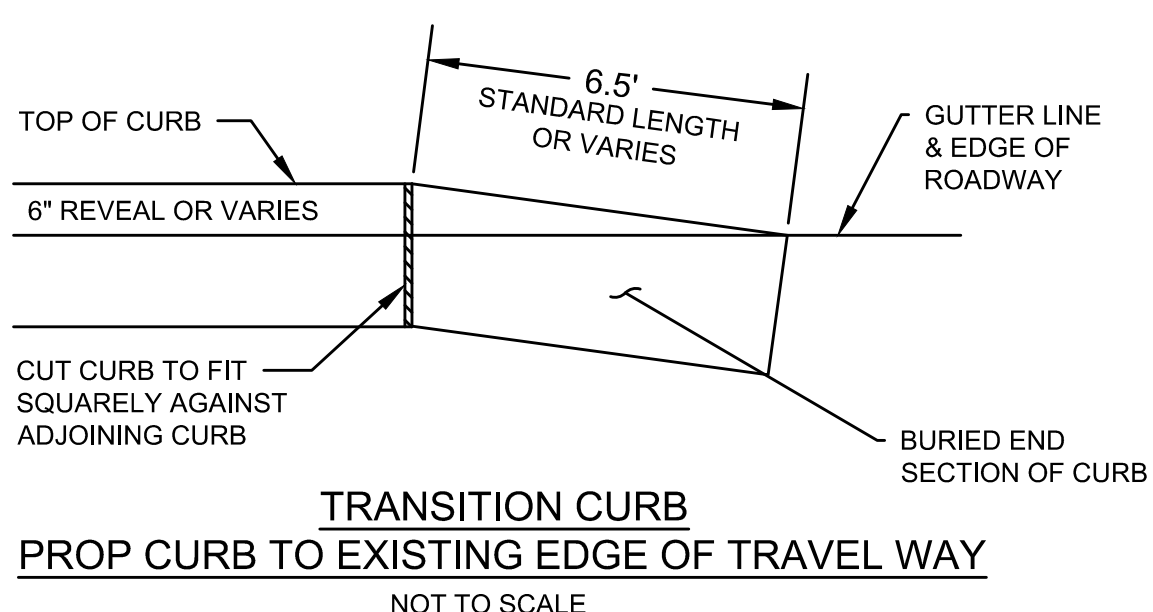
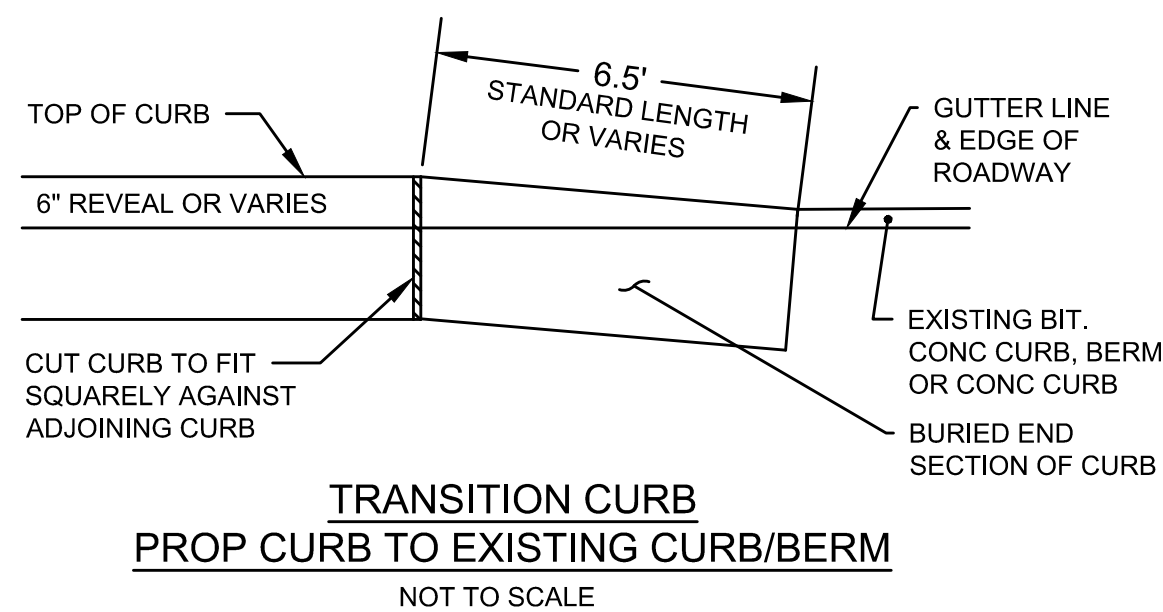
11/11/2022 8:00 PM O:\7100S\7157 - ATTLEBORO - ROUTE 123\DRAWING FILES\PLANSET\7157 DETAILS DWG (MADOT-D.STB)



NOTES:

- A CLEAR GROUND SPACE SHALL CONSIST OF A STABLE AND FIRM AREA, COMPLYING WITH 521 CMR 6.5 (FORWARD REACH) OR 521 CMR 6.6 (SIDE REACH) AND SHALL BE PROVIDED AT EACH OF THE PEDESTRIAN PUSH BUTTONS.
 - WHERE A FORWARD APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL ABUT AND BE CENTERED ON THE CLEAR GROUND SPACE.
 - WHERE A PARALLEL APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL BE WITHIN TEN INCHES (10") HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.

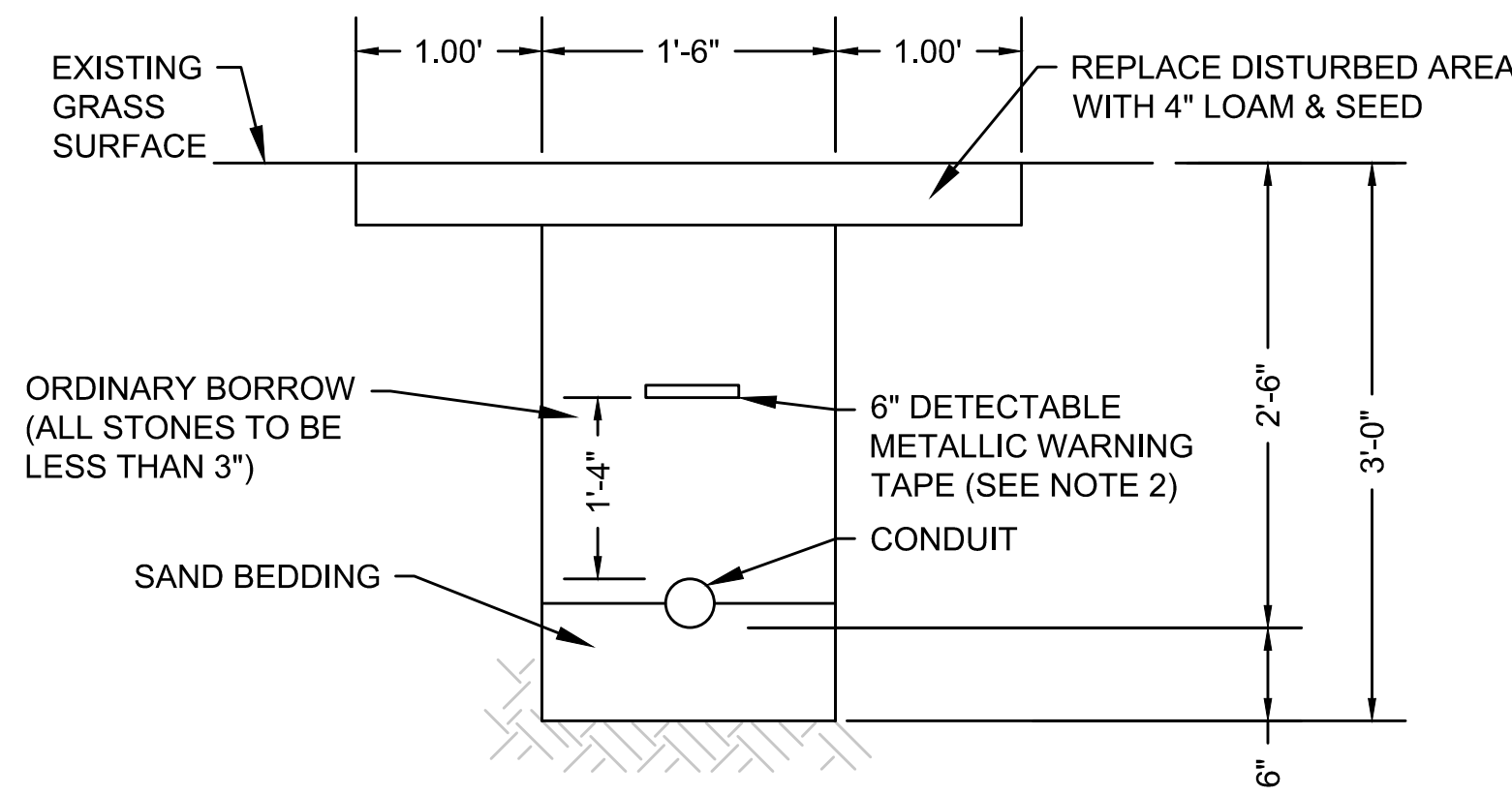
PEDESTRIAN PUSH BUTTON CLEAR ZONE
NOT TO SCALE



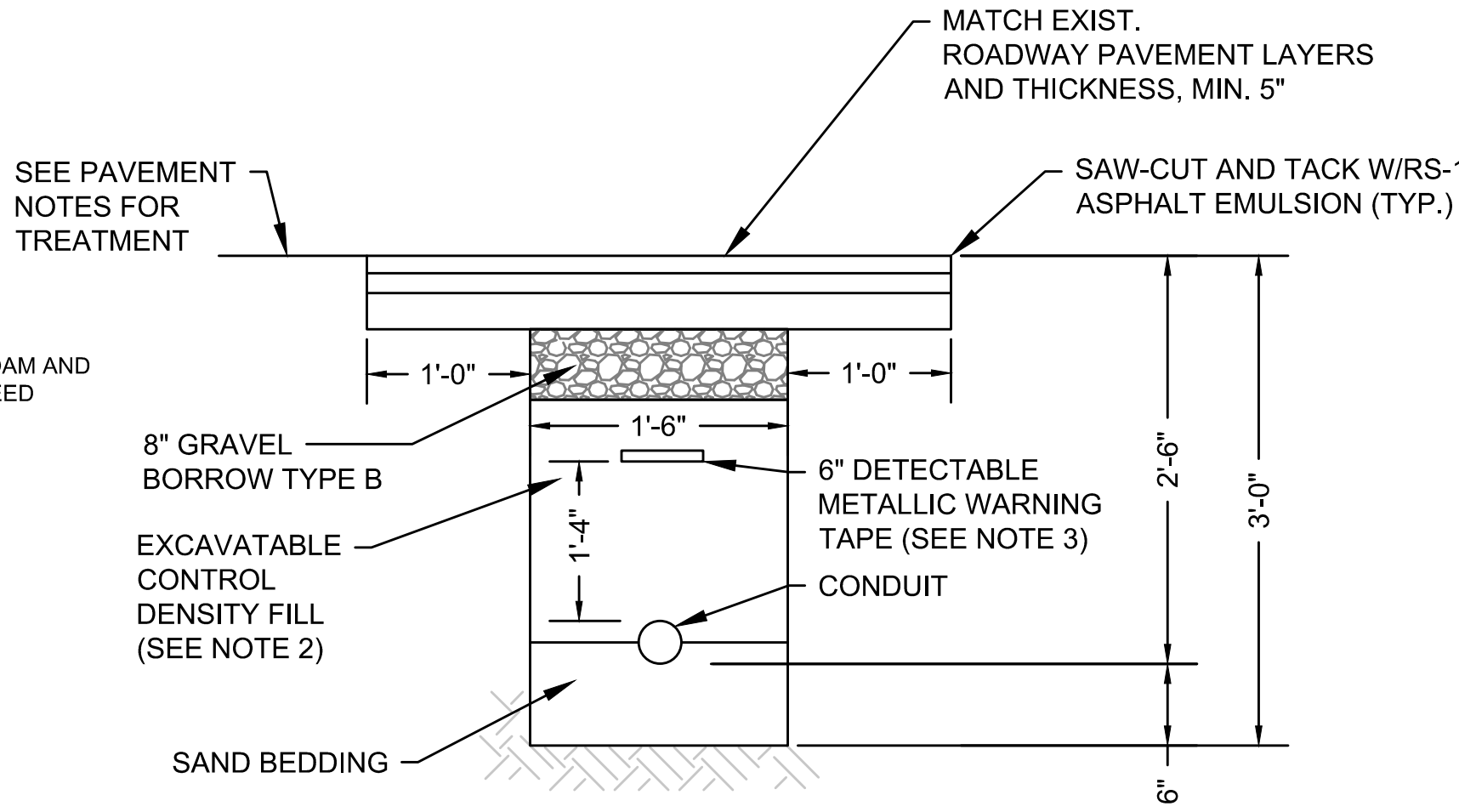
TREE PROTECTION NOTES:

- TREE PROTECTION SHALL BE APPLIED TO ALL TREES TO REMAIN WITHIN 10 FEET OF THE LIMITS OF WORK AND AS DIRECTED BY THE ENGINEER.

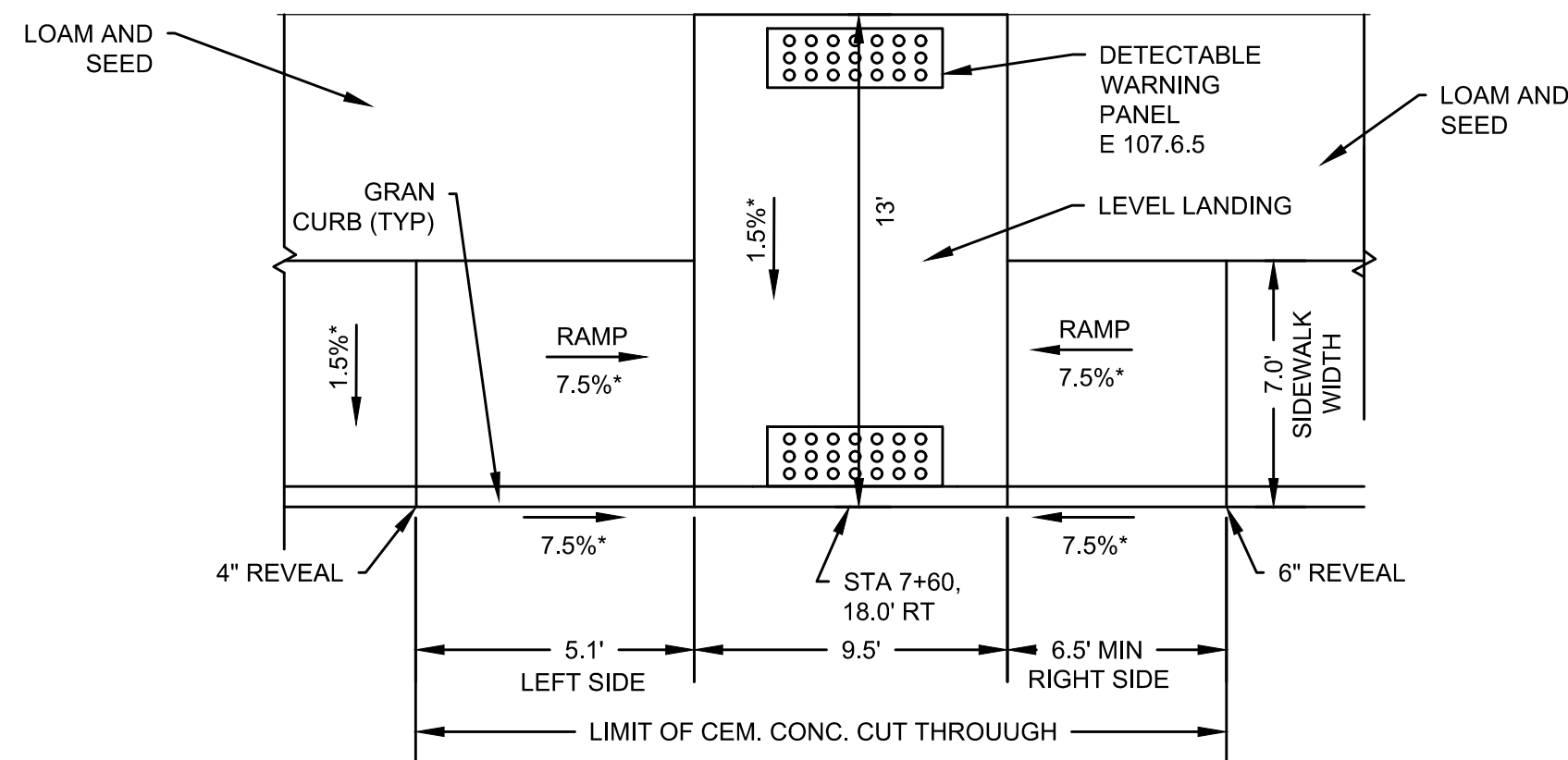
TREE PROTECTION
NOT TO SCALE



CONDUIT: UNDER GRASS AREAS
NOT TO SCALE

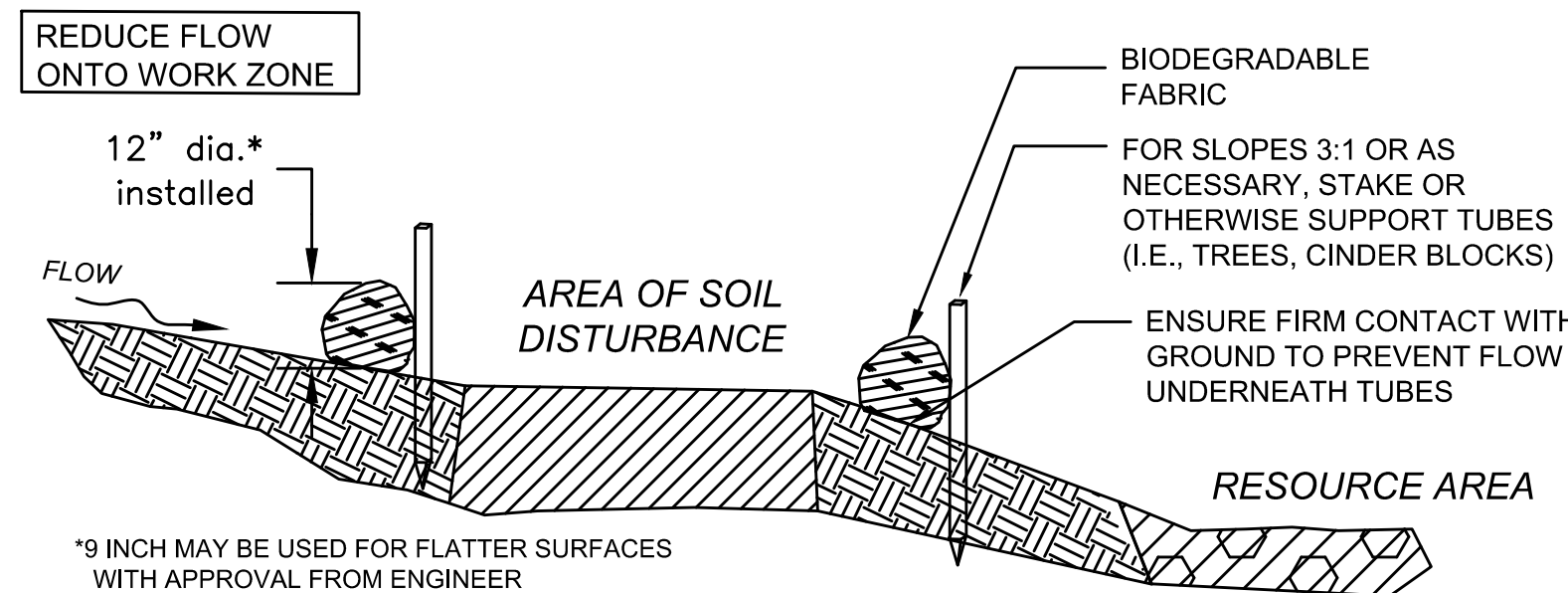


CONDUIT: CROSSING ROADWAY
NOT TO SCALE



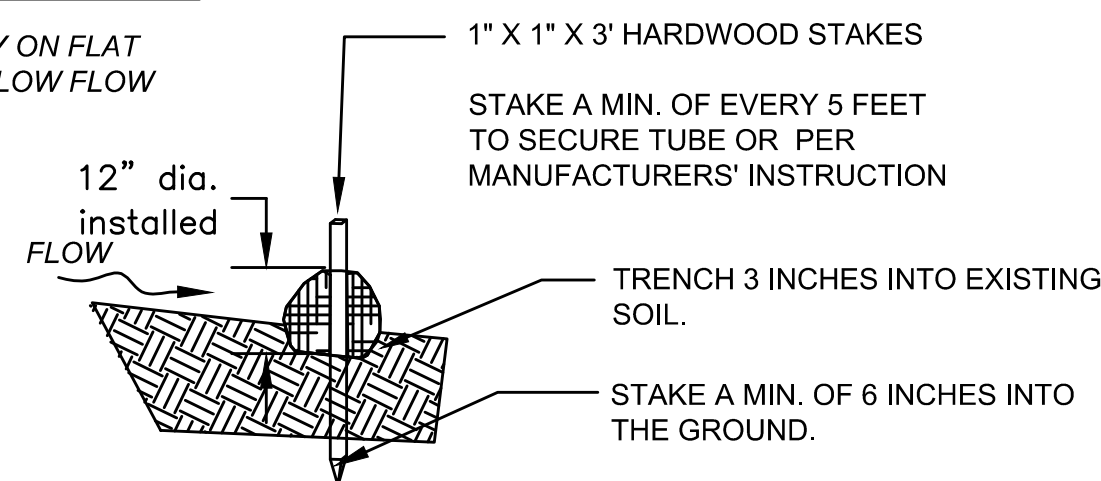
DETAIL FOR CEM CONC CUT THROUGH
NOT TO SCALE

COMPOST FILTER TUBE

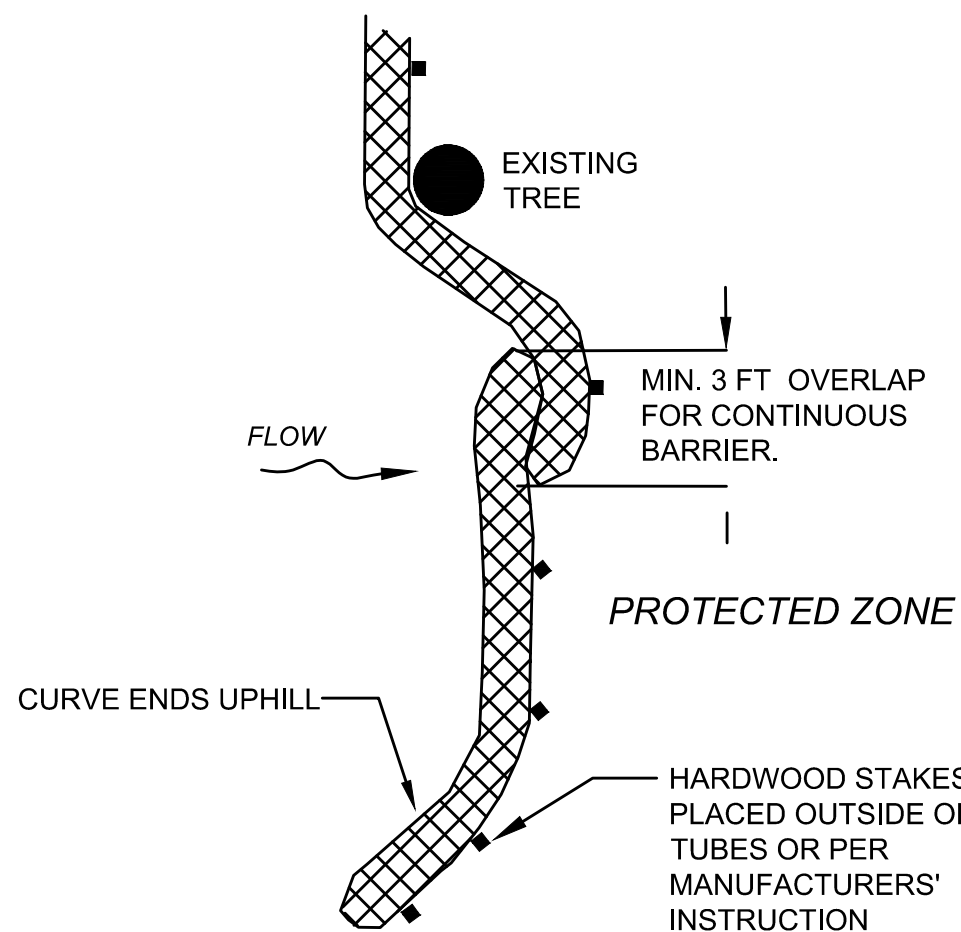


12 INCH STRAW WATTLE

TO BE USED ONLY ON FLAT SURFACES WITH LOW FLOW



SECTION

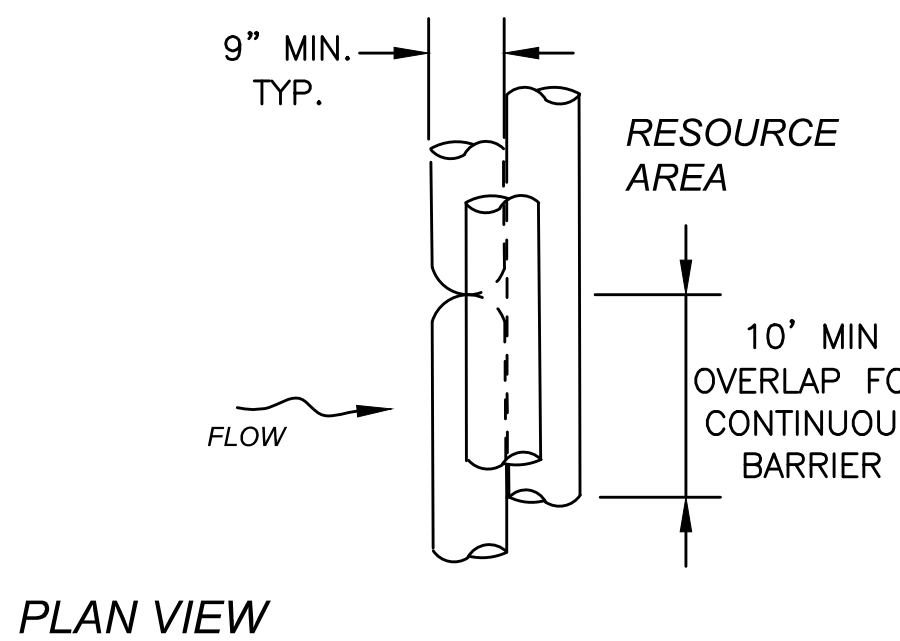


PLAN VIEW

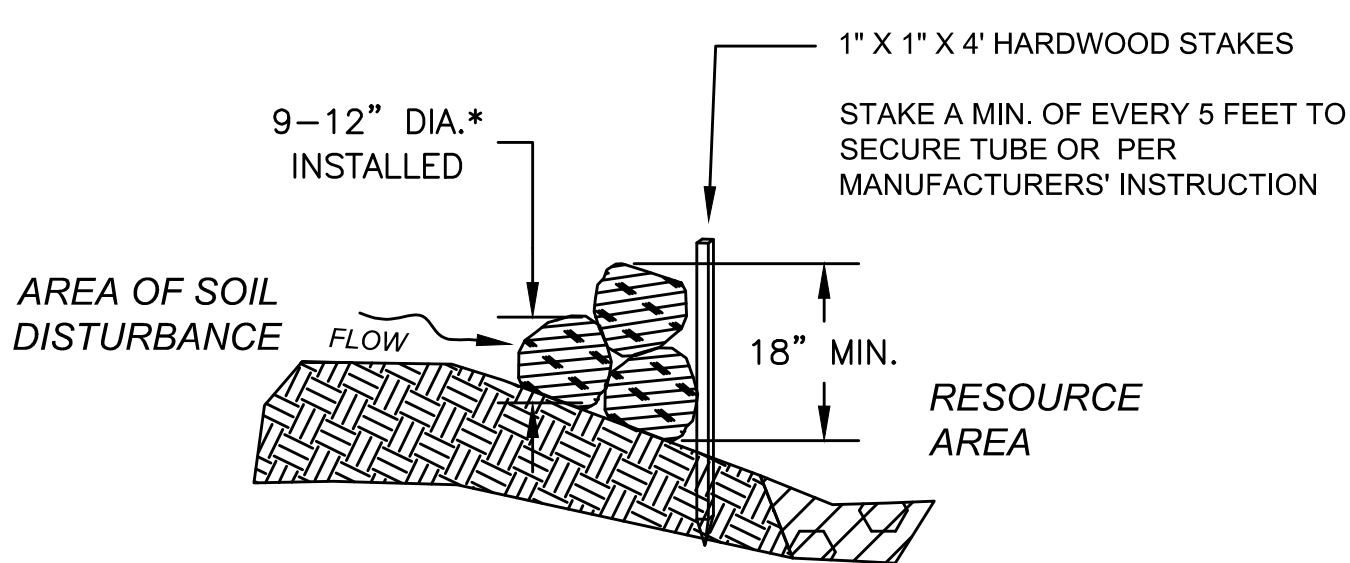
SEDIMENT BARRIERS - COMPOST FILTER TUBES & STRAW WATTLES

NOT TO SCALE

20181210_MassDOT



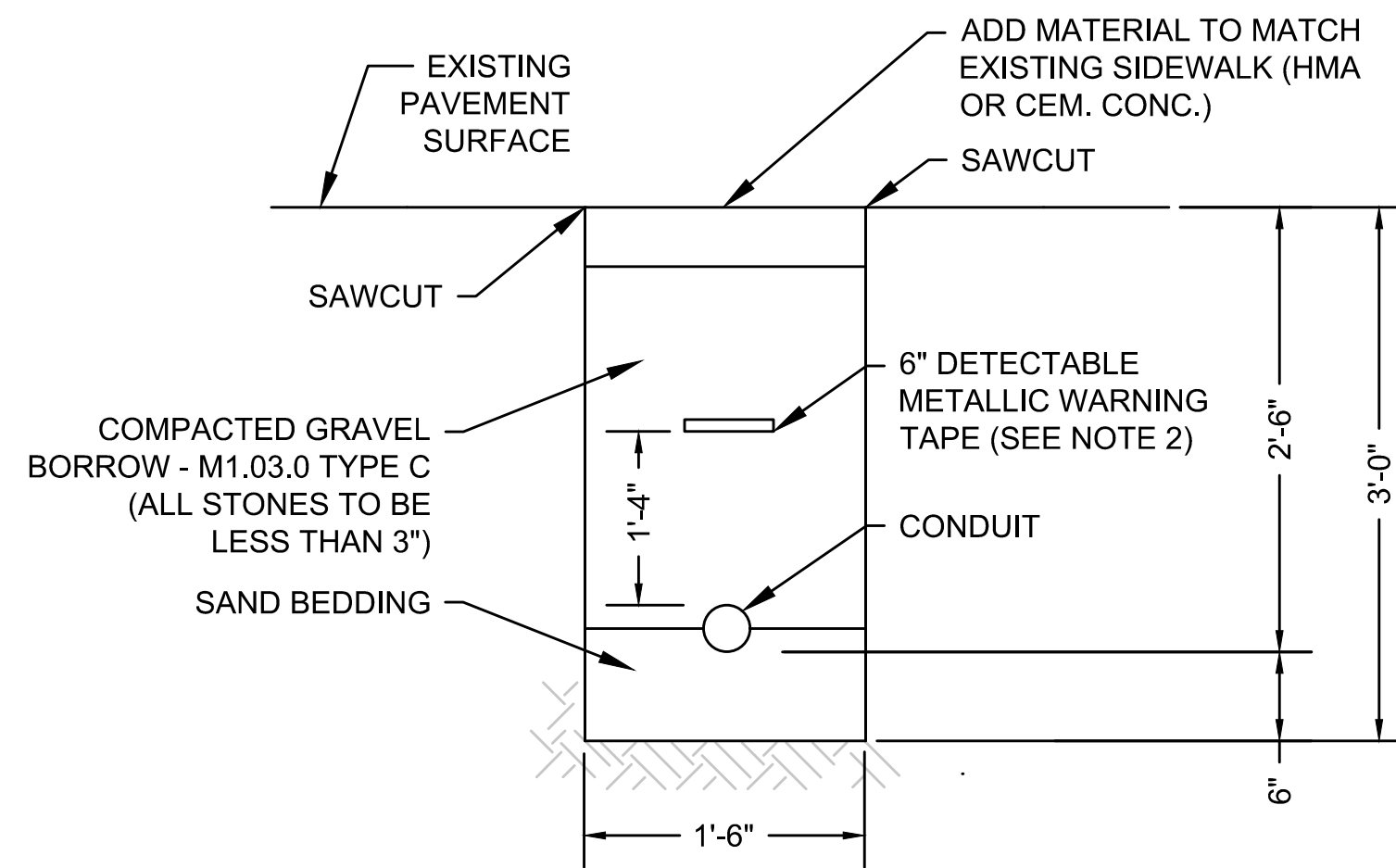
PLAN VIEW



SECTION

COMPOST FILTER TUBE BERM
(SLOPES 2:1 OR STEEPER)

NOT TO SCALE



CONDUIT: UNDER SIDEWALK AREAS
NOT TO SCALE

CONDUIT NOTES

- SCHEDULE 80 ELECTRICAL CONDUIT TYPE NM-PLASTIC (UL), WITH PULL ROPE UNLESS OTHERWISE APPROVED BY MASSDOT.
- CONTROL DENSITY FILL SHALL MEET THE REQUIREMENTS OF SUBSECTION M4.08.0.
- WARNING TAPE SHALL BE PER CURRENT APWA STANDARDS.

1/11/2022 8:00 PM C:\710057167-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANSET\7157 DETAILS.DWG (MADOT-D.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:	KYL
DESIGNED BY:	KYL
CHECKED BY:	DJ

REGISTERED PROFESSIONAL	PREPARED BY



SUBCONSULTANT

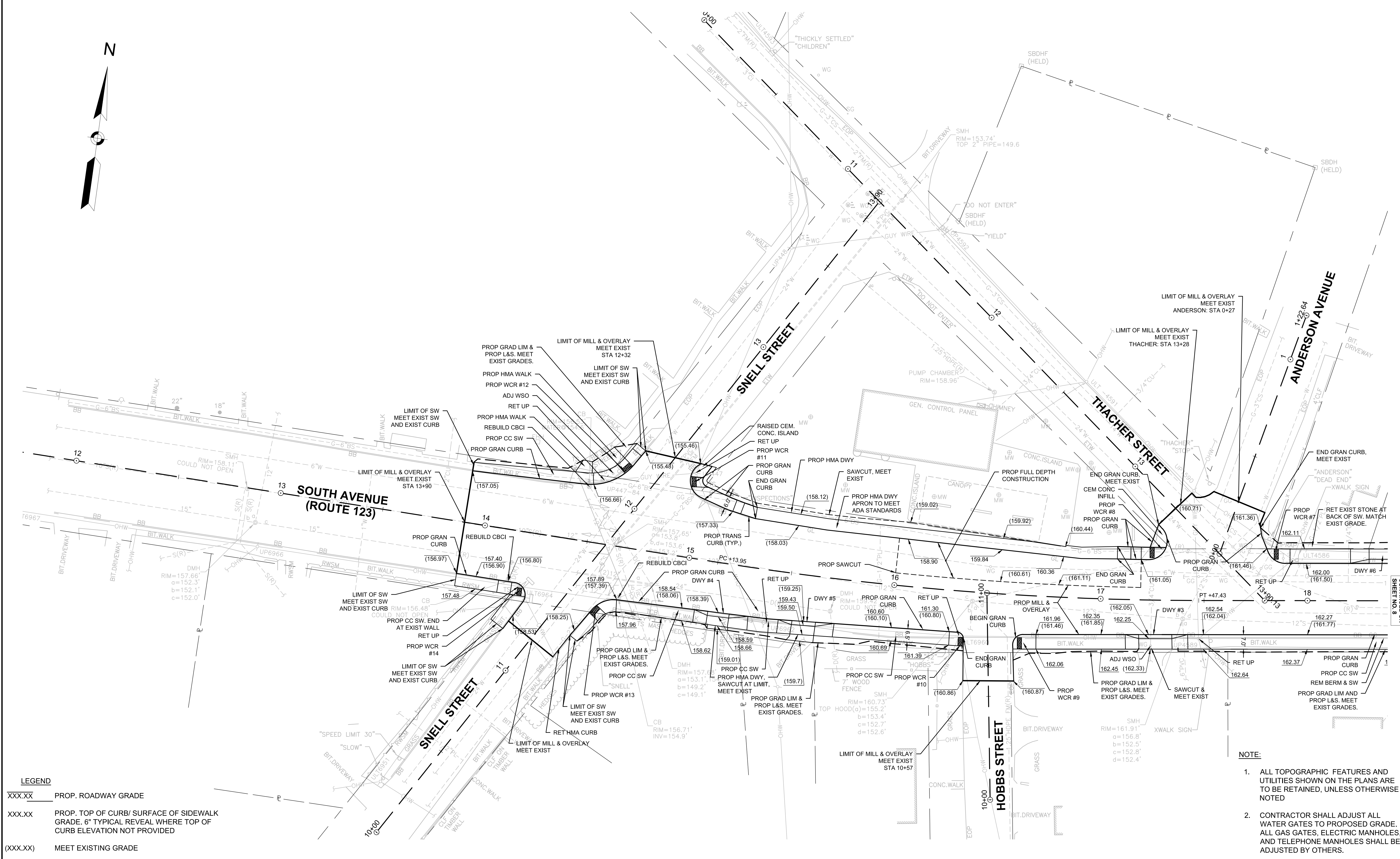
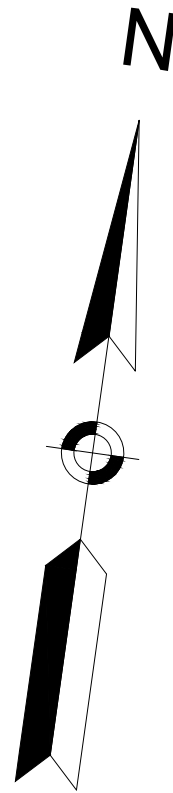
SCALE
NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE
Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts CONSTRUCTION DETAILS

BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	6 of 28

1/11/2022 8:01 PM C:\710057167-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANS\7157 GENERAL.DWG (MADOT-D-STB)



- LEGEND**
- XXX.XX PROP. ROADWAY GRADE
- XXX.XX PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE. 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED
- (XXX.XX) MEET EXISTING GRADE

- NOTE:**
- ALL TOPOGRAPHIC FEATURES AND UTILITIES SHOWN ON THE PLANS ARE TO BE RETAINED, UNLESS OTHERWISE NOTED
 - CONTRACTOR SHALL ADJUST ALL WATER GATES TO PROPOSED GRADE. ALL GAS GATES, ELECTRIC MANHOLES, AND TELEPHONE MANHOLES SHALL BE ADJUSTED BY OTHERS.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KLJ/MC

DESIGNED BY:
KLJ/MC

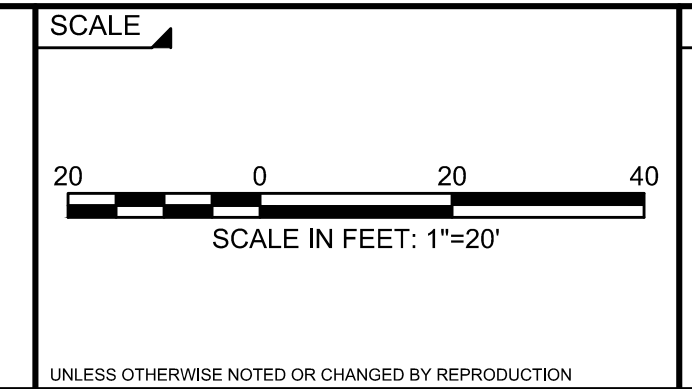
CHECKED BY:
DJ

REGISTERED PROFESSIONAL

PREPARED BY



SUBCONSULTANT



Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts

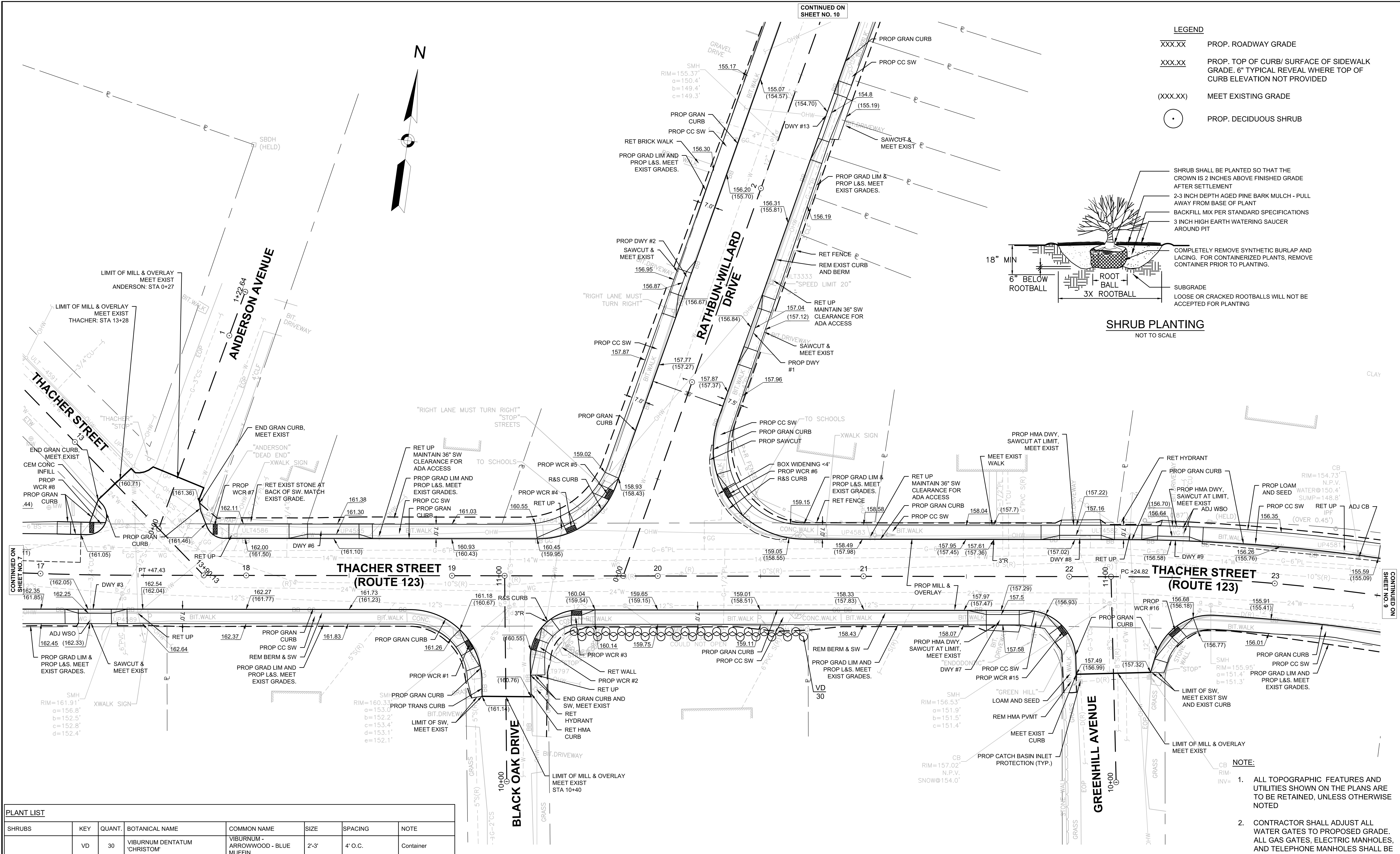
GENERAL PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **7 of 28**

1/11/2022 8:01 PM C:\710057157-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANS\7157 GENERAL.DWG (MADOT-D.STB)



PLANT LIST						
SHRUBS	KEY	QUANT.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	VD	30	VIBURNUM DENTATUM 'CHRISTOM'	VIBURNUM - ARROWWOOD - BLUE MUFFIN	2'-3'	4' O.C.
						Container

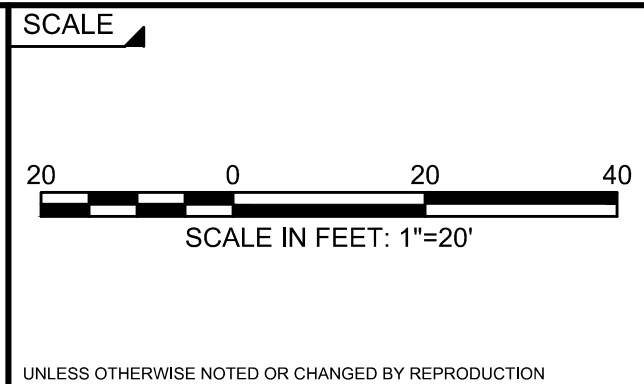
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:	KLJ/MC
DESIGNED BY:	KLJ/MC
CHECKED BY:	DJ

REGISTERED PROFESSIONAL	PREPARED BY

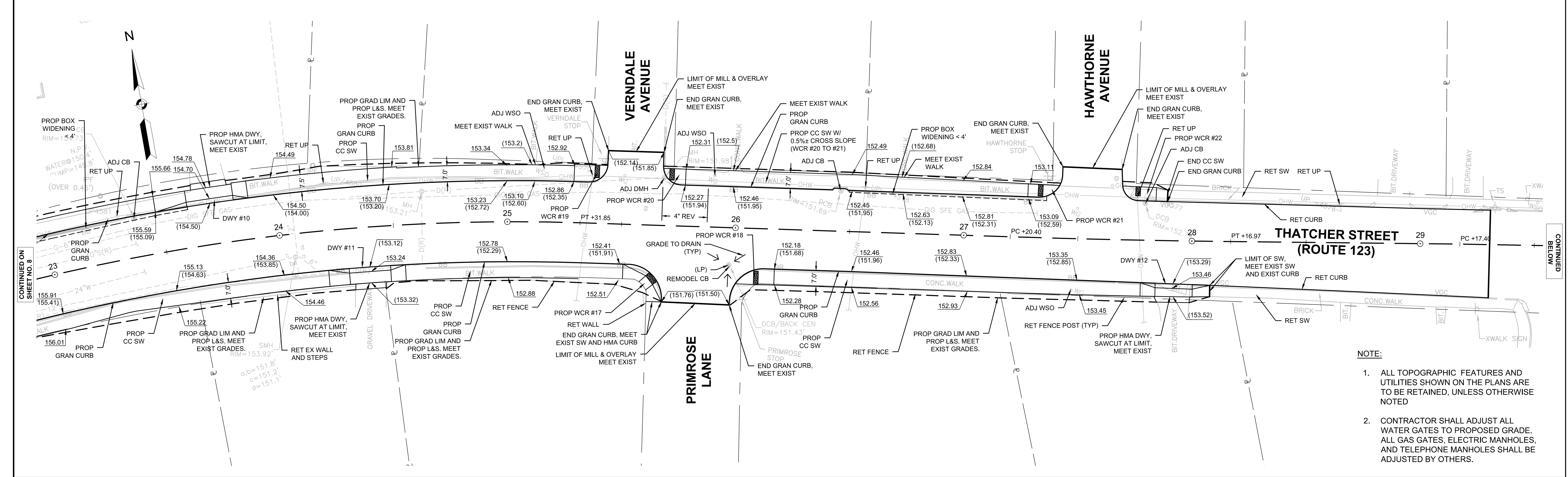


SUBCONSULTANT

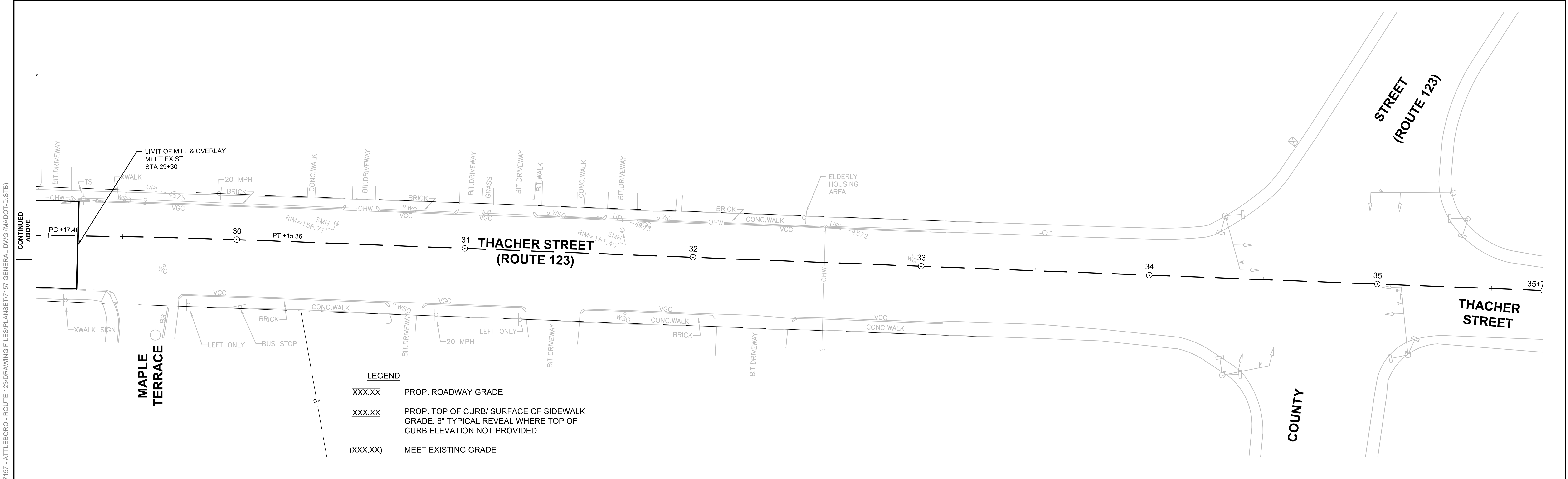




TITLE	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts GENERAL PLAN
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BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	8 of 28



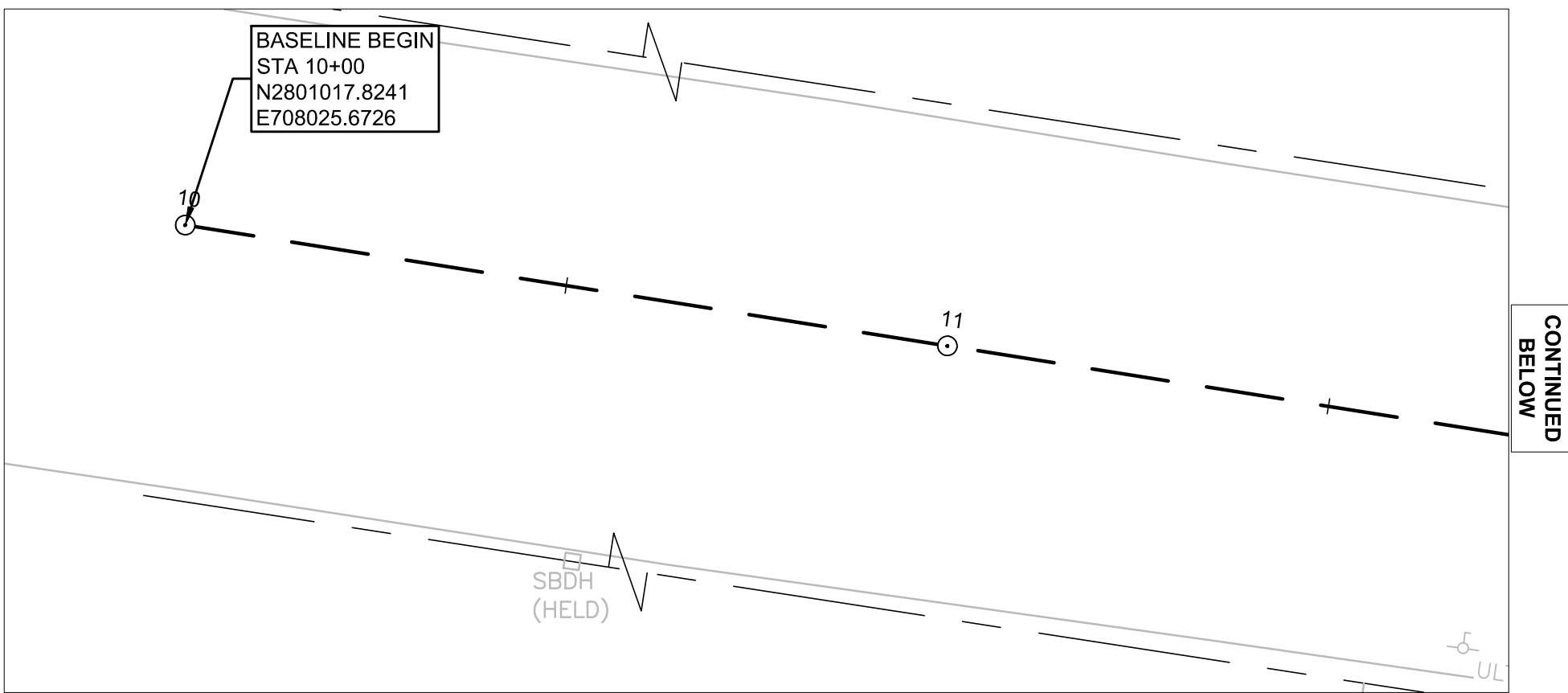
- NOTE:
1. ALL TOPOGRAPHIC FEATURES AND UTILITIES SHOWN ON THE PLANS ARE TO BE RETAINED, UNLESS OTHERWISE NOTED
 2. CONTRACTOR SHALL ADJUST ALL WATER GATES TO PROPOSED GRADE. ALL GAS GATES, ELECTRIC MANHOLES, AND TELEPHONE MANHOLES SHALL BE ADJUSTED BY OTHERS.



				DRAWN BY: KL/JMC		REGISTERED PROFESSIONAL	<div>PREPARED BY</div> <div> www.BETA-Inc.com</div>	SUBCONSULTANT	<div>SCALE</div> <div> SCALE IN FEET: 1"=20'</div> <div>UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION</div>	<div>TITLE</div> <div>Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts GENERAL PLAN</div>	BETA JOB NO. 7157
				DESIGNED BY: KL/JMC							ISSUE DATE 11/10/2021
				CHECKED BY: DJ							SHEET NO. 9 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS							

1/11/2022 8:01 PM Q:\710057157-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANS\7157 GENERAL.DWG (MADOT-D.STB)

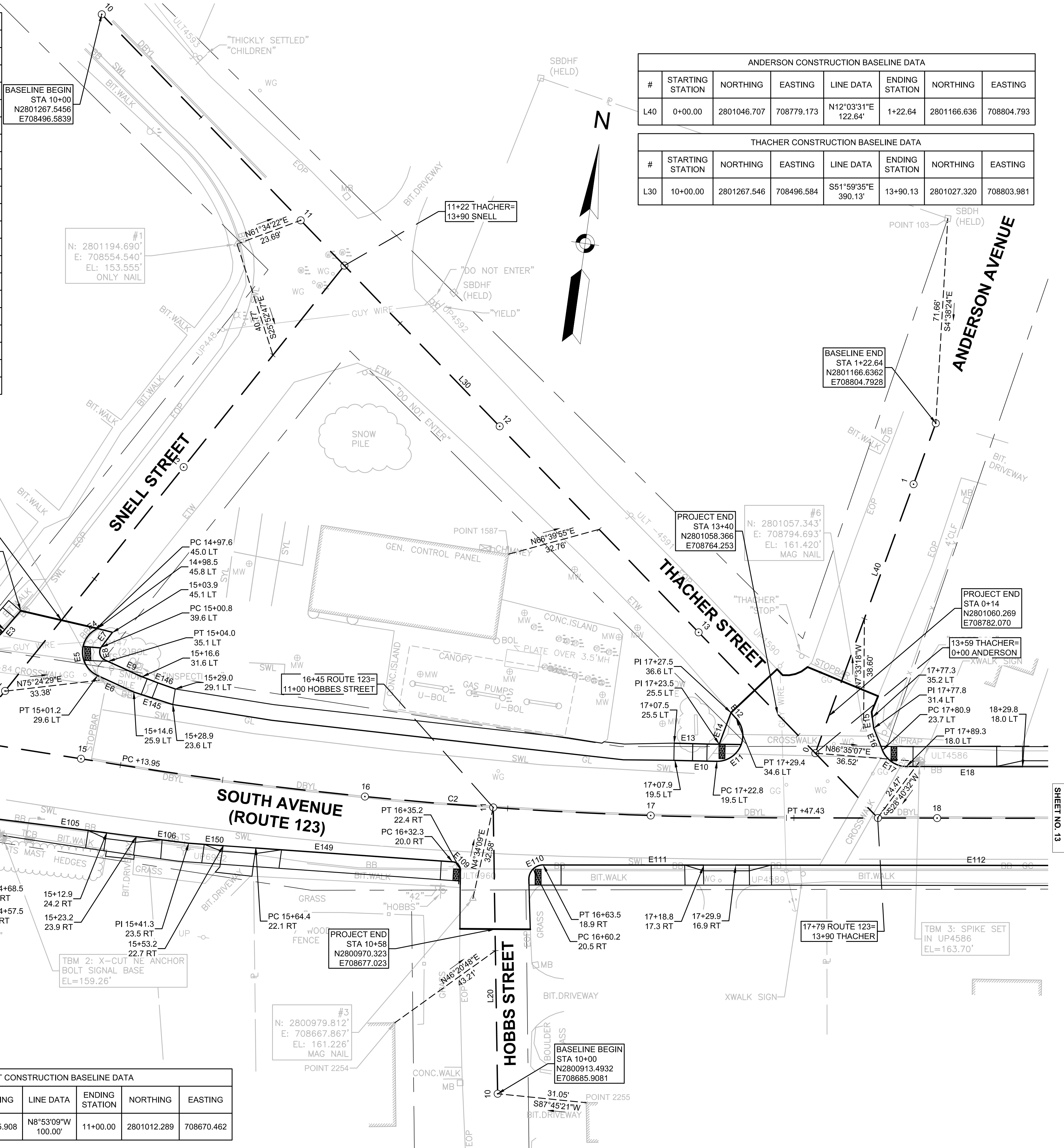
1/11/2022 8:03 PM C:\710057167-ATTLEBORO-ROUTE 123DRAWING FILES\PLANSET\7157 BASE LINE.DWG (MADOT-D.STB)



ROUTE 123 CONSTRUCTION BASELINE DATA								
#	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2801017.824	708025.673		S89°00'02"E 513.95'	15+13.95	2801008.859	708539.549
C2	15+13.95	2801008.859	708539.549	R=1500.00' Δ=8°55'05" L=233.47' T=116.97'		17+47.43	2801022.933	708772.362

BENCHMARK DATA				
BECNHMARK #	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM 1	2801046.597	708243.096	161.45	HYD MBMK-1.XCUT.LBOM
TBM 2	2800978.299	708502.340	159.26	MBMK-2.XCUT.TSIGBOLT
TBM 3	2801048.865	708815.618	163.70	MBMK-3.SP.KN.UP
TBM 4	2801114.819	709241.565	159.58	MBMK 4

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E1	54.66	S88°40'08"W		
E2	26.60	S6°26'30"	27.00	14.49
E3	8.72	S32°13'38"W		
E4	1.31	S48°54'50"W		
E5	19.24	122°29'48"	9.00	16.40
E6	13.88	S73°34'58"E		
E7	6.74	N29°09'11"E		
E8	6.33	110°40'52"	3.28	4.74
E9	13.06	S73°34'58"E		
E10	14.86	0°18'04"	2827.50	7.43
E11	20.81	132°28'19"	9.00	20.44
E12	2.76	S49°26'33"E		
E13	23.17	0°42'40"	1867.34	11.59
E14	11.78	N12°26'48"E		
E15	3.84	S15°30'35"E		
E16	8.27	S29°37'58"E		
E17	10.73	68°17'09"	9.00	6.10
E18	40.57	N82°04'53"E		
E145	14.31	S80°11'02"E		
E146	12.37	S77°59'01"E		



CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E100	28.46	S89°02'40"E		
E101	12.35	117°57'01"	6.00	9.98
E102	15.87	S29°21'47"W		
E103	16.40	N32°52'08"E		
E104	13.25	S4°13'34"	14.00	7.17
E105	44.47	N89°12'57"E		
E106	18.46	N89°12'57"E		
E109	4.12	78°43'40"	3.00	2.46
E110	3.85	44°05'39"	5.00	2.02
E111	55.90	S82°02'30"W		
E112	149.95	S82°04'34"W		
E149	68.86	N86°02'21"E		
E150	12.09	N86°02'21"E		

SURVEY TRAVERSE DATA			
POINT #	NORTHING	EASTING	DESCRIPTION
1	2801194.690	708554.540	MMAG
2	2801037.184	708528.299	MMAG-GPS2
3	2800979.812	708667.867	MMAG
6	2801057.343	708794.693	MMAG
103	2801238.066	708798.996	MMON SBDH
1256	2800914.051	708404.257	DSTR E WLRT B
1587	2801100.631	708663.490	BD C NE
2254	2800933.066	708646.921	BD E/15 TO FND
2255	2800914.709	708716.938	BD B/3 TO FND

SNELL CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L10	10+00.00	2800856.663	708394.315	N30°34'22"E 390.00'	13+90.00	2801192.447	708592.682

HOBBS STREET CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L20	10+00.00	2800913.493	708685.908	N8°53'09"W 100.00'	11+00.00	2801012.289	708670.462

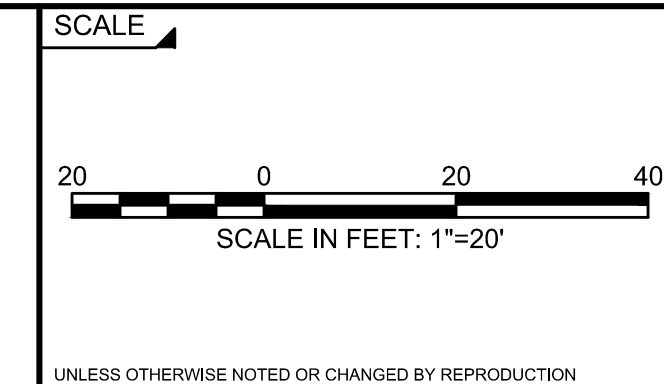
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DESIGNED BY:	KLJMC
CHECKED BY:	DJ

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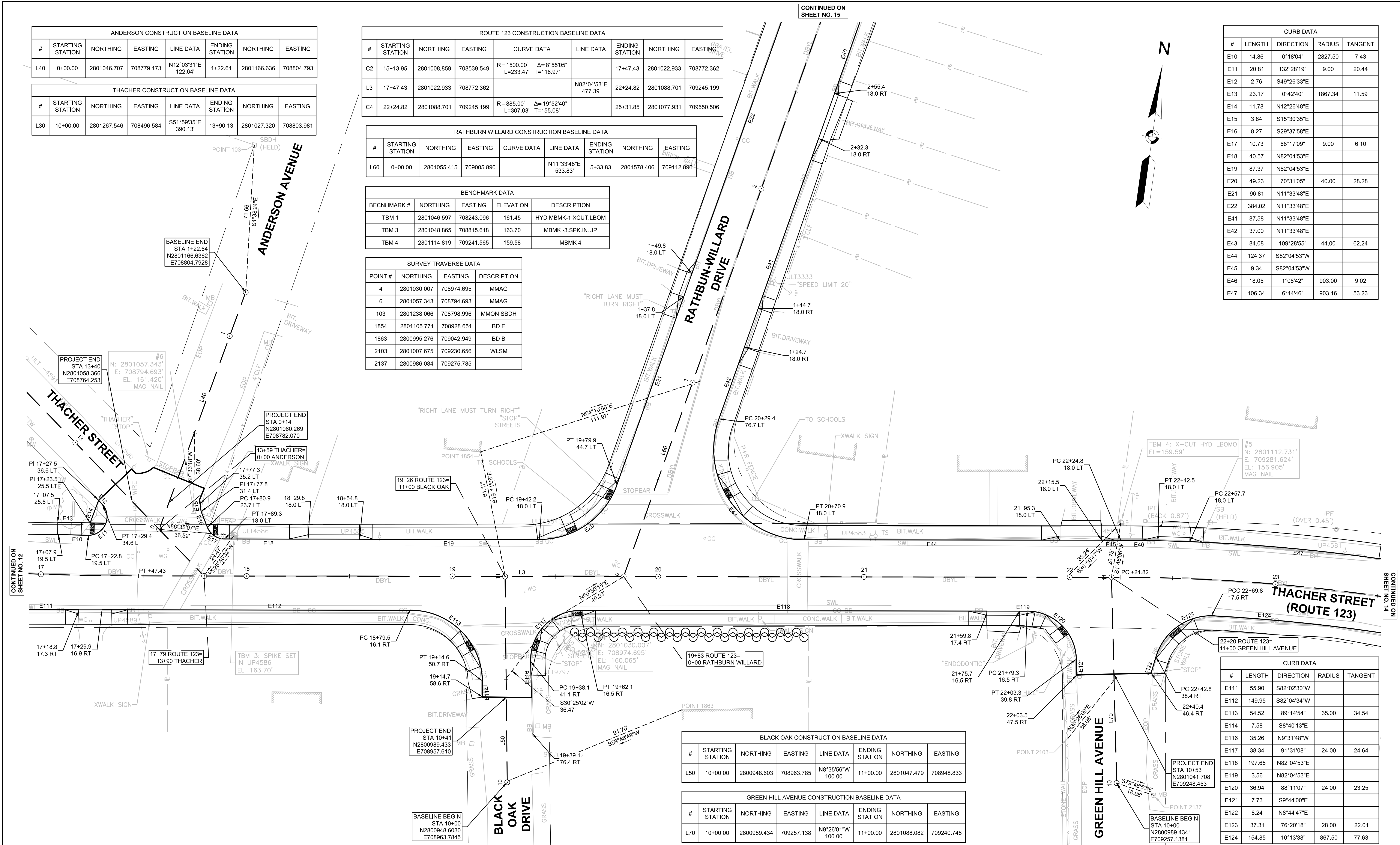


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TITLE	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TIE PLAN
BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	12 of 28

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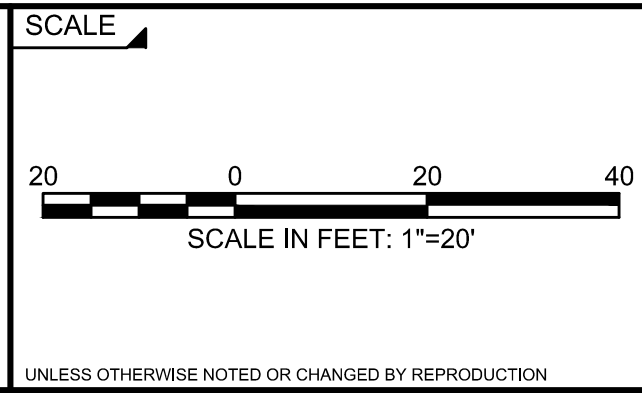
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DESIGNED BY:	KL/JMC
CHECKED BY:	DJ

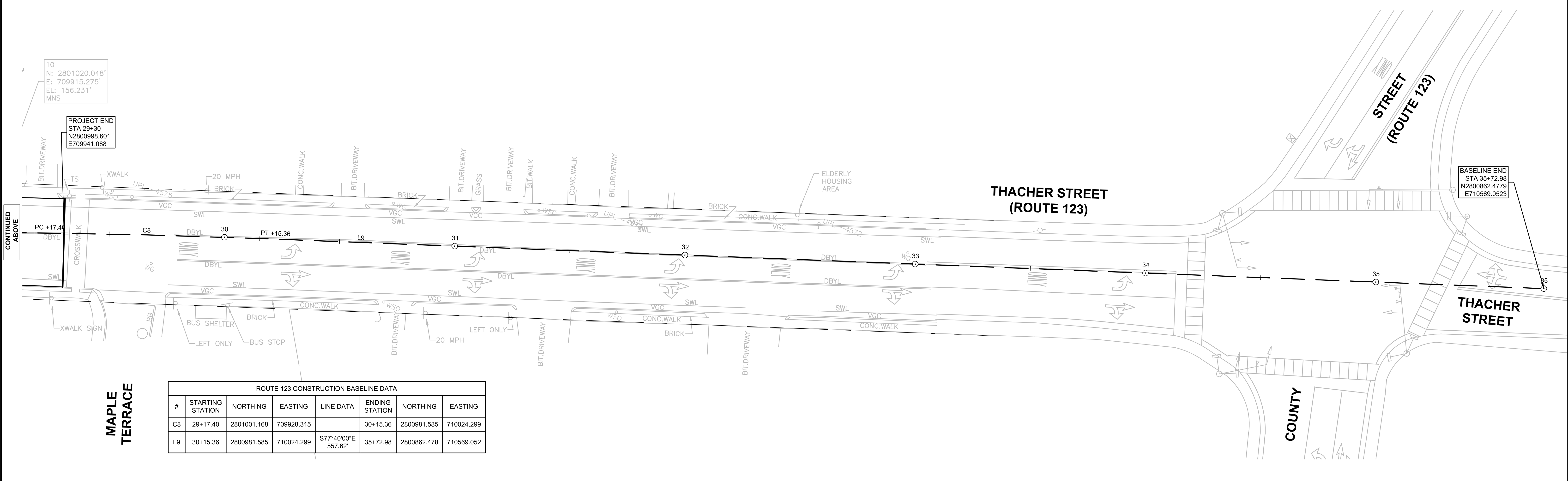
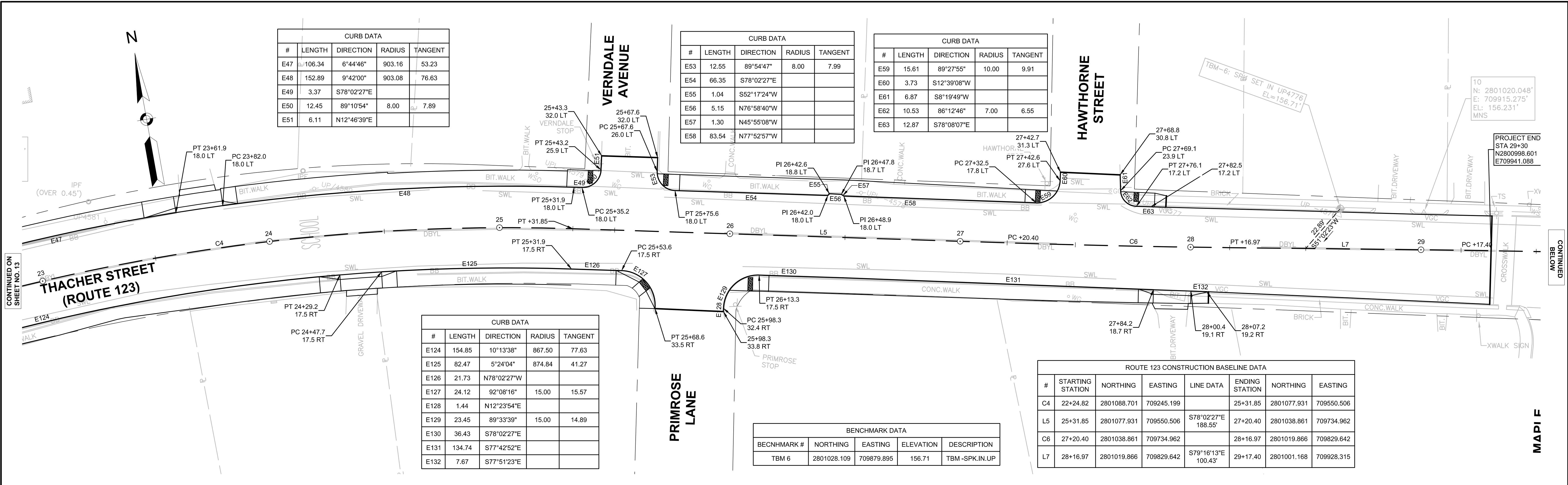
REGISTERED PROFESSIONAL	PREPARED BY



SUBCONSULTANT



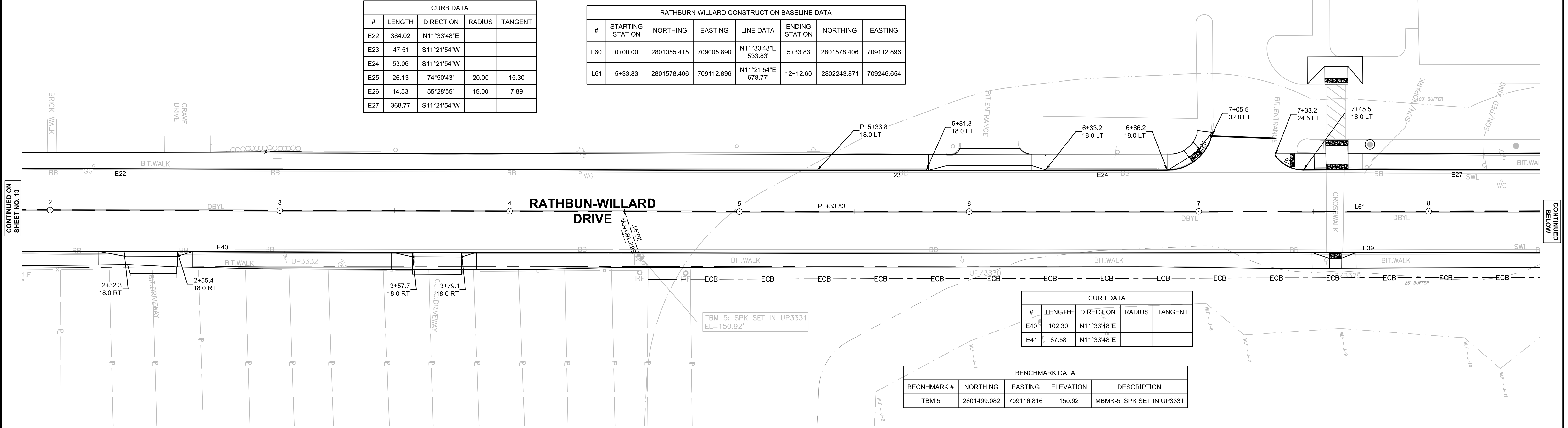
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BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	13 of 28



				DRAWN BY: KL/JMC		REGISTERED PROFESSIONAL		PREPARED BY		SUBCONSULTANT		SCALE SCALE IN FEET: 1"=20'		TITLE Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TIE PLAN		BETA JOB NO. 7157	
				DESIGNED BY: KL/JMC		 www.BETA-Inc.com				ISSUE DATE 11/10/2021							
				CHECKED BY: DJ						SHEET NO. 14 of 28							
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS													

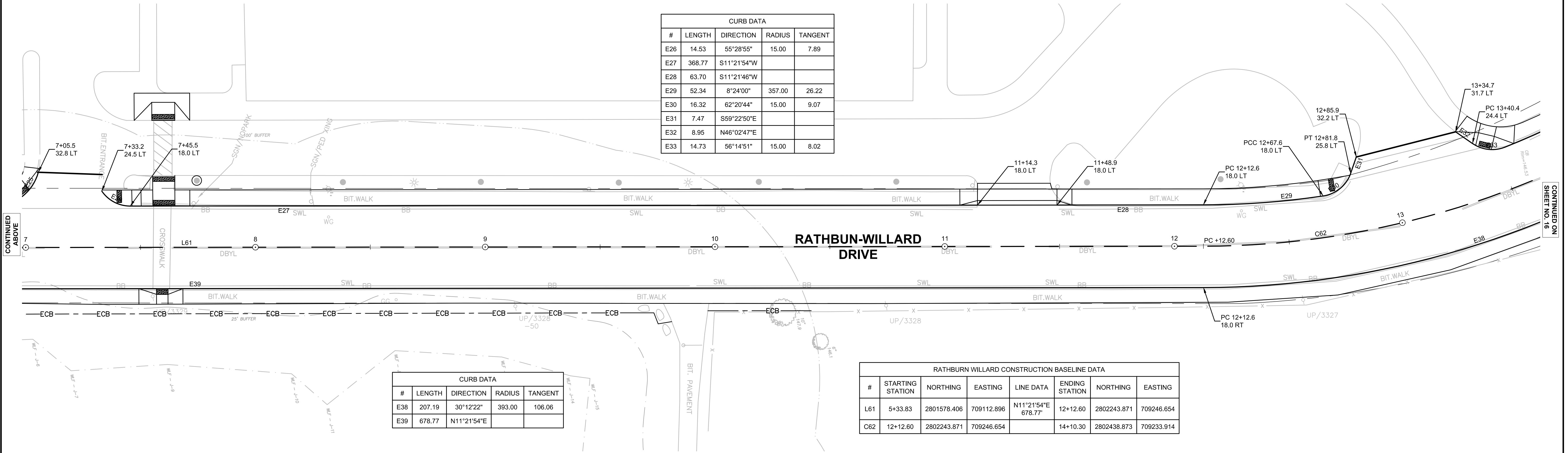
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CONTINUED ON
SHEET NO. 13



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BELOW

CONTINUED
ABOVE



CONTINUED ON
SHEET NO. 16

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY:	KLJMC
CHECKED BY:	DJ

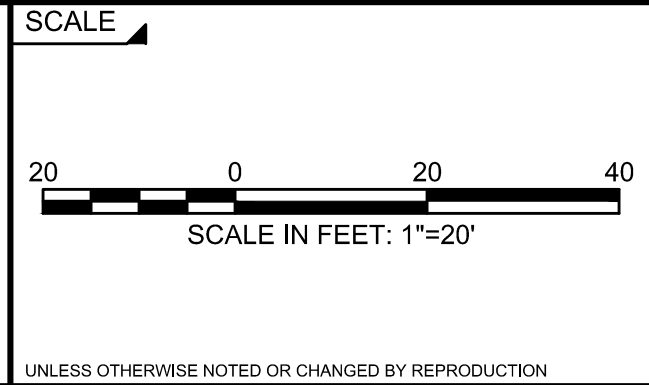
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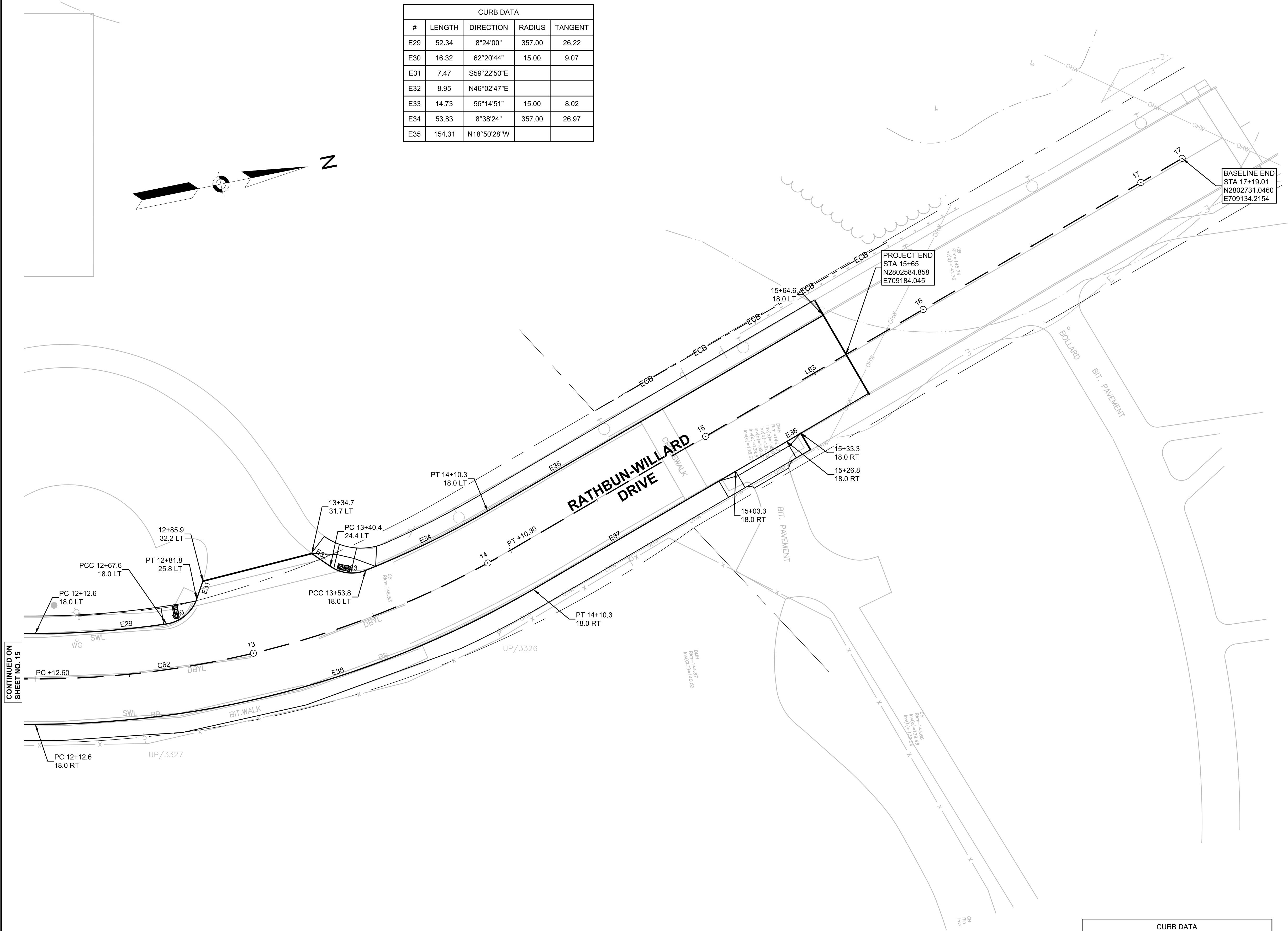
Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts

TIE PLAN

BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	15 of 28

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CONTINUED ON
SHEET NO. 15



CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E29	52.34	8°24'00"	357.00	26.22
E30	16.32	62°20'44"	15.00	9.07
E31	7.47	S59°22'50"E		
E32	8.95	N46°02'47"E		
E33	14.73	56°14'51"	15.00	8.02
E34	53.83	8°38'24"	357.00	26.97
E35	154.31	N18°50'28"W		

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E36	6.53	S18°55'23"E		
E37	93.01	N18°50'28"W		
E38	207.19	30°12'22"	393.00	106.06

RATHBURN WILLARD CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
C62	12+12.60	2802243.871	709246.654		14+10.30	2802438.873	709233.914
L63	14+10.30	2802438.873	709233.914	N18°50'28"W 308.71'	17+19.01	2802731.046	709134.215

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY:	KL/JMC
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SCALE



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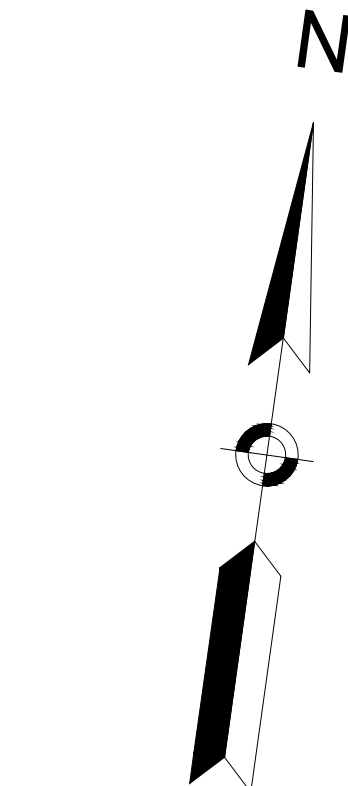
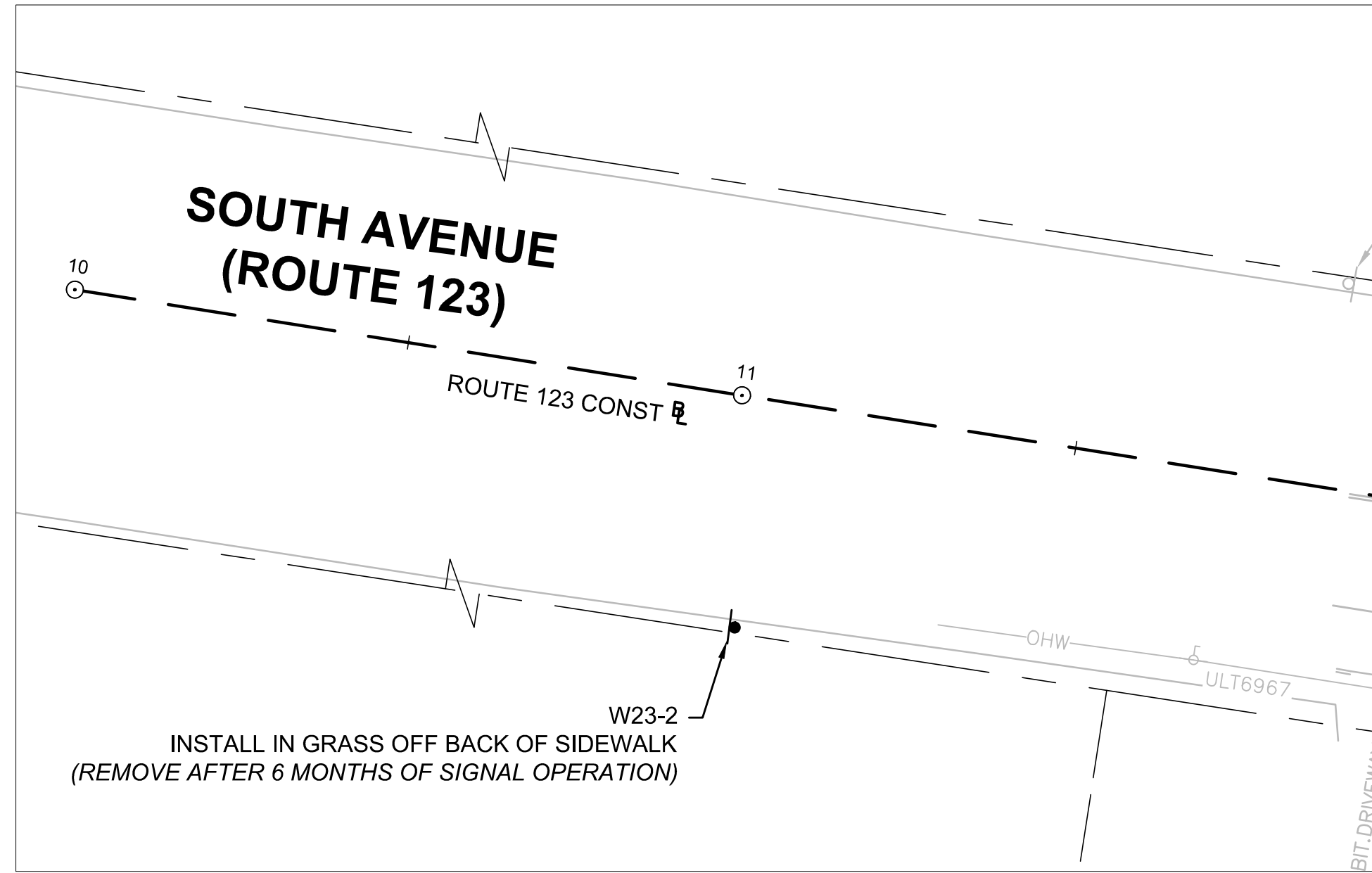
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**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

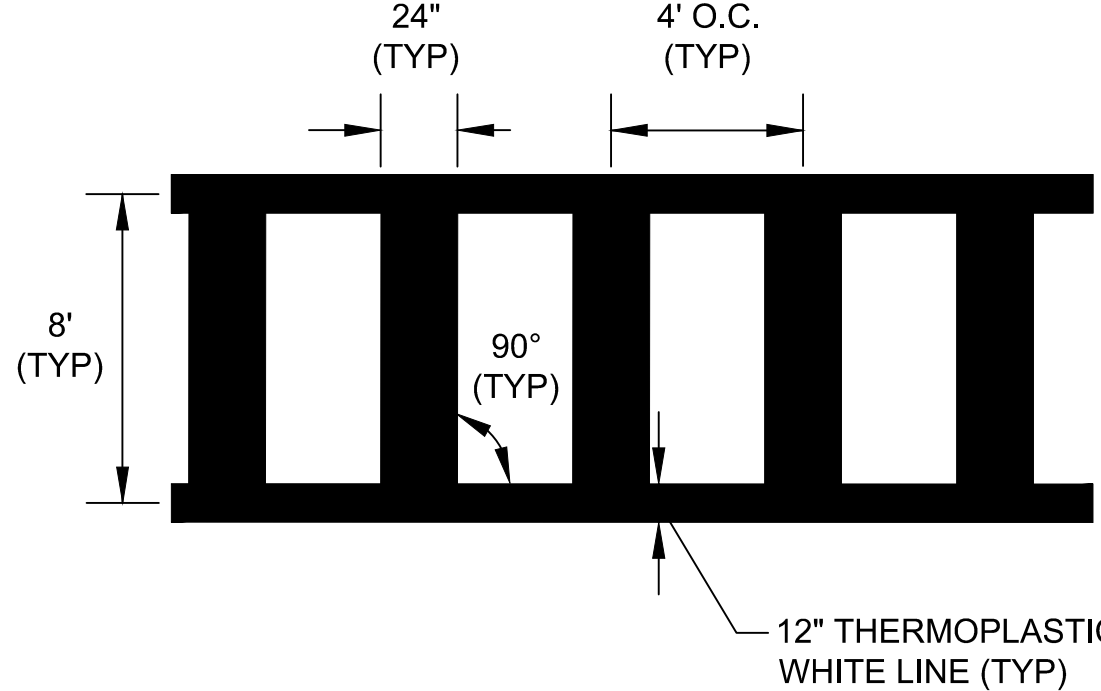
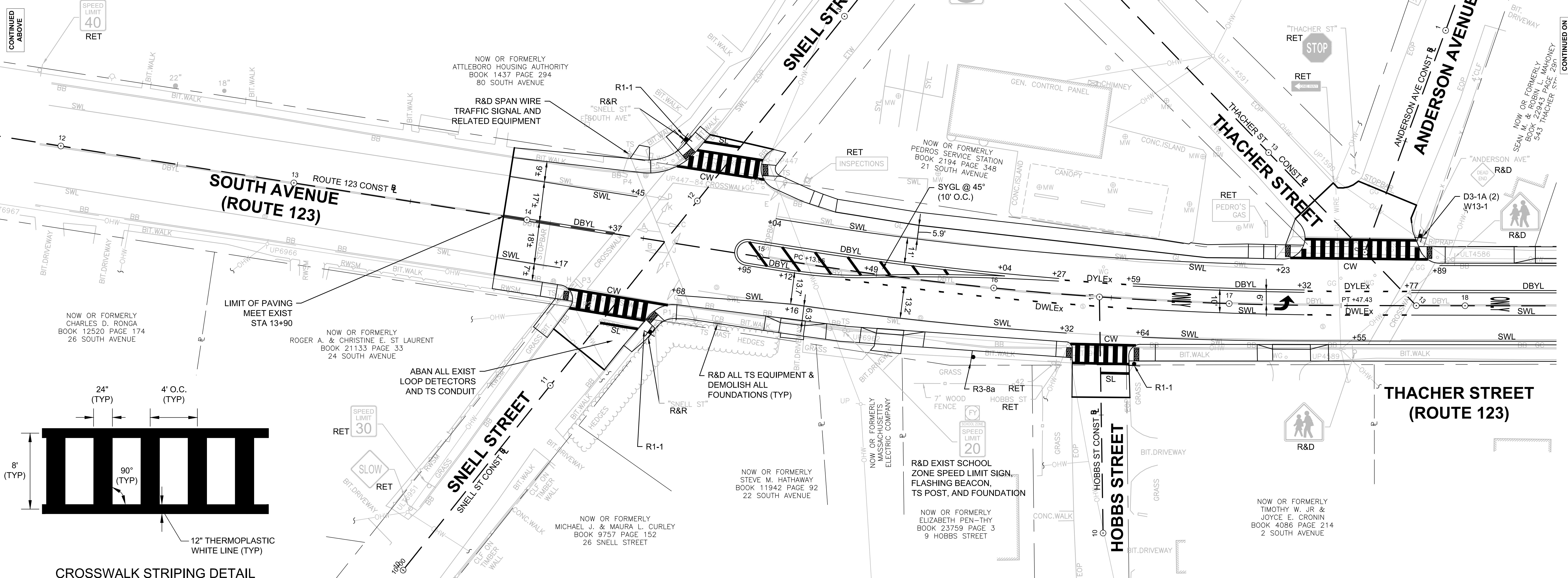
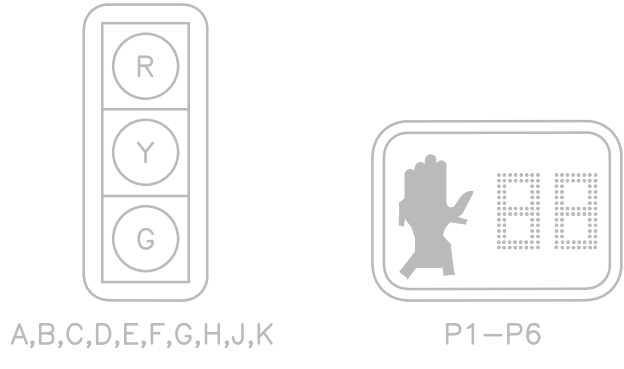
TIE PLAN

BETA JOB NO.	7157
ISSUE DATE	11/10/2021
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EXISTING SIGNAL HEAD DESIGNATIONS
SNELL STREET



CROSSWALK STRIPING DETAIL

NOT TO SCALE

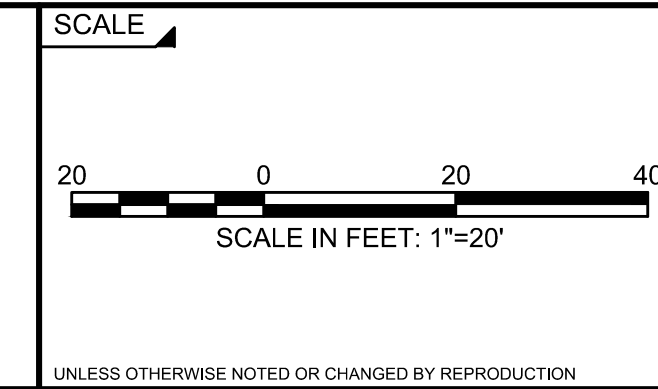
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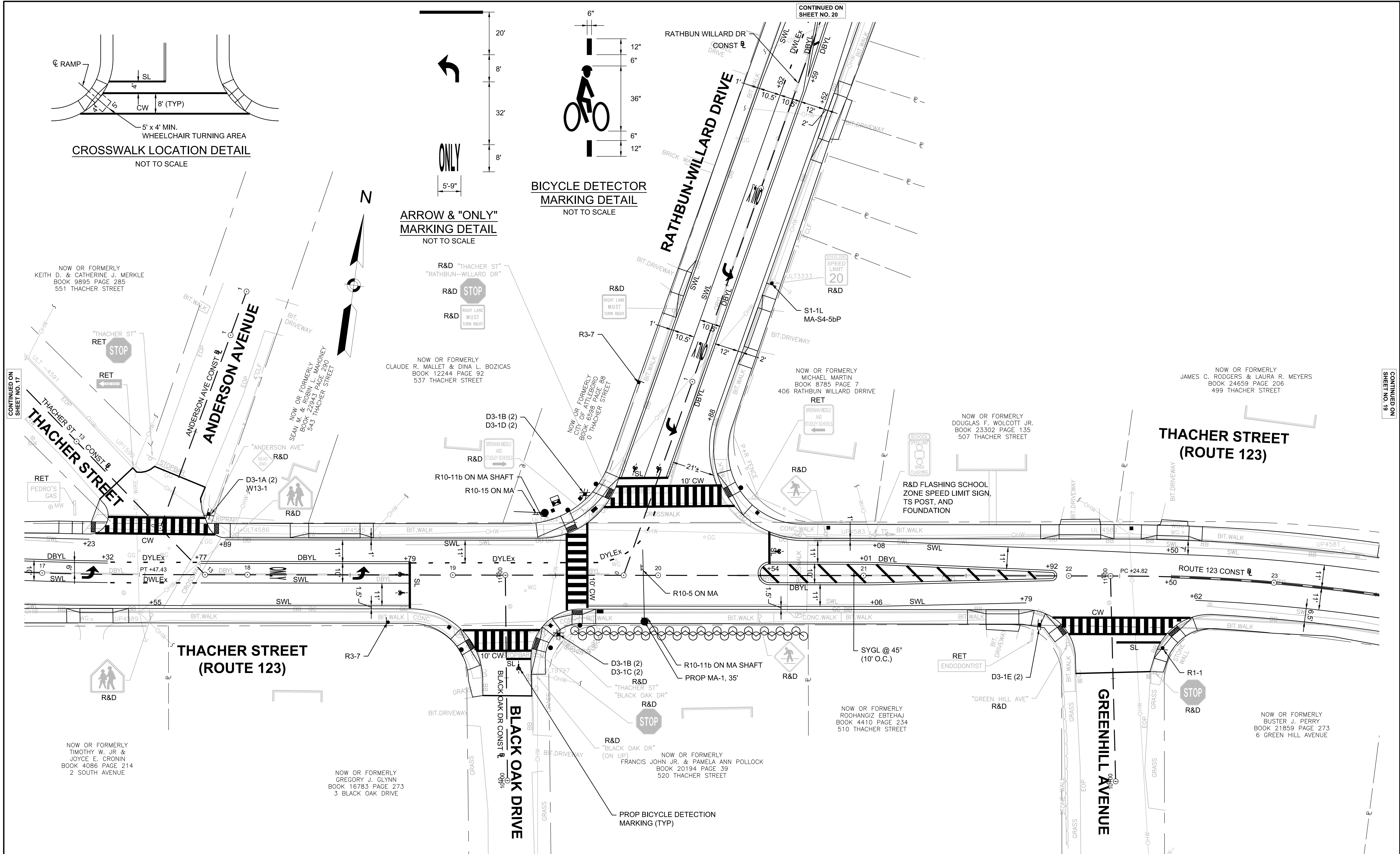
TITLE	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts PAVEMENT MARKING AND SIGN PLAN
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BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	17 of 28

- PAVEMENT MARKINGS & SIGNS NOTES
- ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE R&D UNLESS OTHERWISE NOTED ON PLANS.
 - ALL R&S TRAFFIC SIGNS AND SIGNAL EQUIPMENT SHALL BE REMOVED AND TRANSPORTED TO A LOCATION DEFINED BY THE CITY.
 - ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
 - CONTRACTOR TO COORDINATE FINAL PAVEMENT MARKING LAYOUT OF RATHBUN-WILLARD DRIVE WITH THE CITY IN ACCORDANCE WITH THE HIGH SCHOOL PROJECT.
 - POSTS SHALL BE GALVANIZED P-5 TYPE (TELESCOPIC POST) - 2" SQUARE.
 - UNLESS OTHERWISE PROVIDED FOR IN THE MUTCD, ALL SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC. ALL R7 SIGNS SHALL BE MOUNTED AT AN ANGLE OF 45° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
 - STREET NAME SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
 - ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS.
 - SIGNS TO BE MOUNTED NEAR THE CURB LINE IN AREAS WITHOUT SIDEWALK SHALL BE SET BACK 2' FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
 - ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.
 - RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLIES SHALL BE PROCURED AND INSTALLED IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.

CONTINUED ON
SHEET NO. 18

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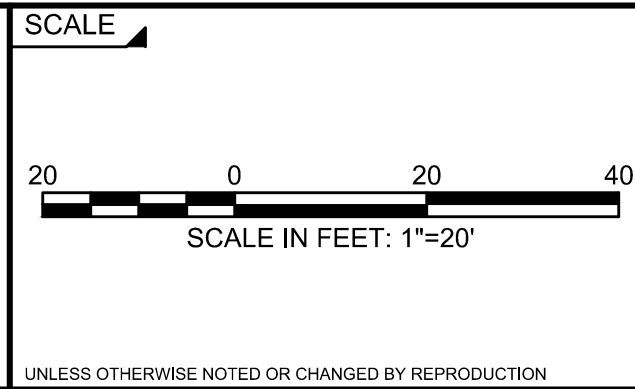
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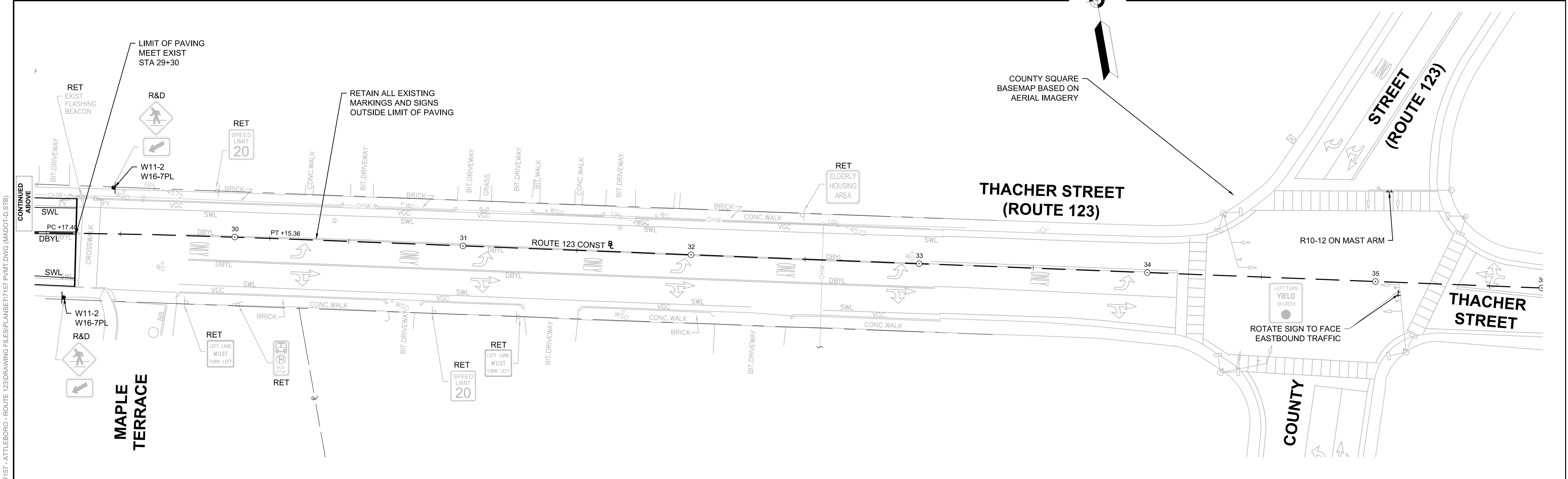
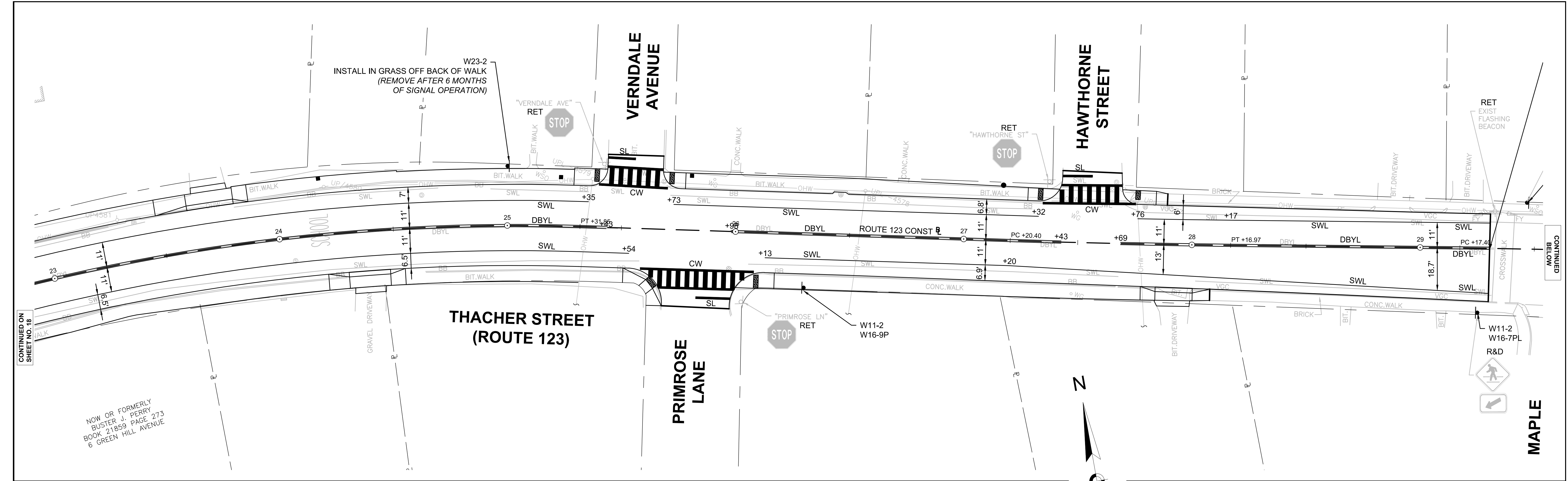
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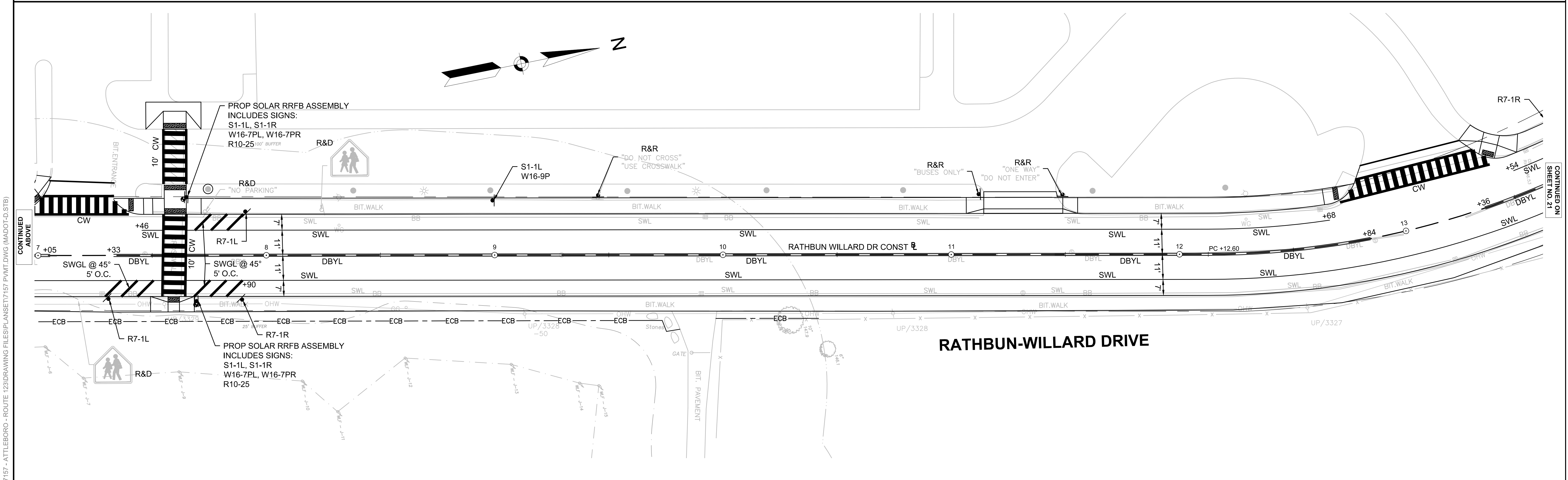
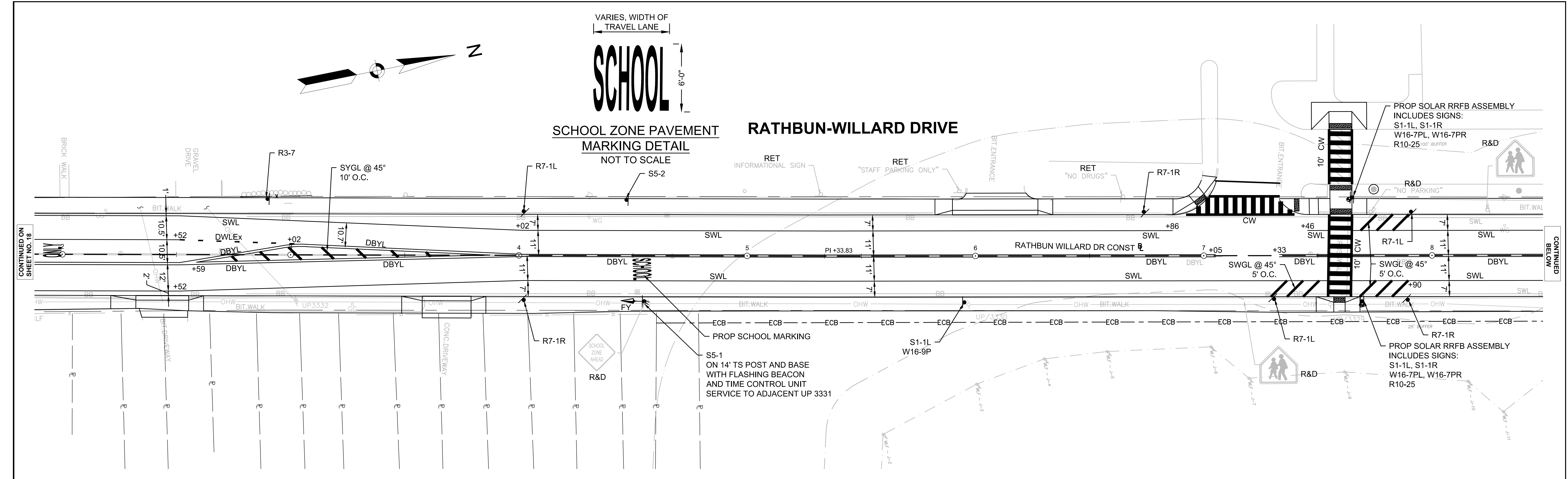


TITLE	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts PAVEMENT MARKING AND SIGN PLAN
BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	18 of 28



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				DESIGNED BY: TD						ISSUE DATE 11/10/2021
				CHECKED BY: DF						SHEET NO. 19 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS						

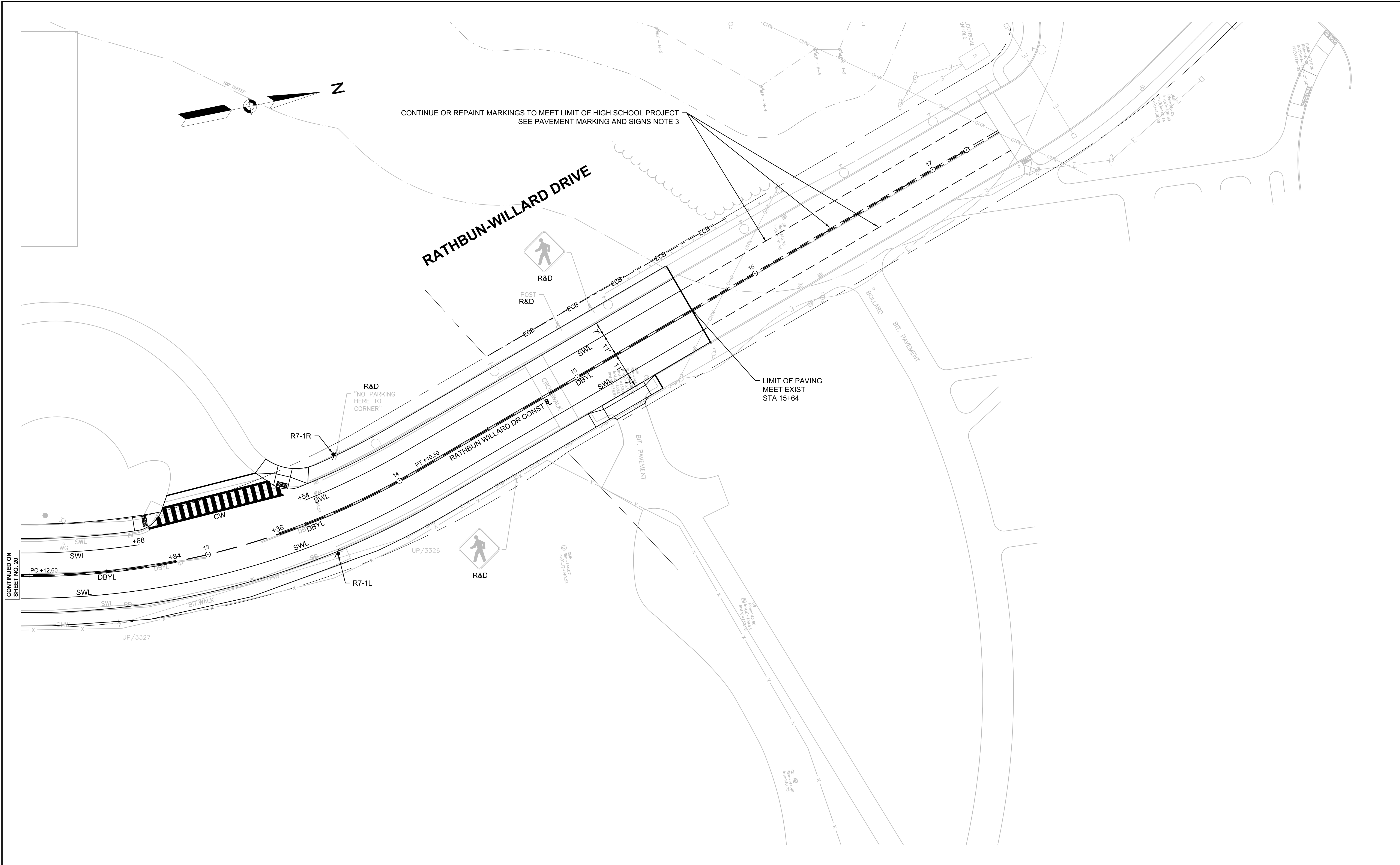
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				DESIGNED BY: TD						ISSUE DATE 11/10/2021
				CHECKED BY: DF						SHEET NO. 20 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS						

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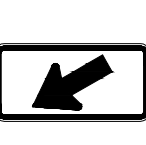
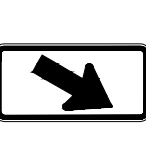







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TITLE

Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
PAVEMENT MARKING AND SIGN PLAN


BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	21 of 28

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IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK- GROUND	LEGEND	BORDER			
R1-1	30 in	30 in		SEE 2009 MUTCD STANDARDS			4	RED	WHITE	WHITE	P-5 4	6.25	25.0
R3-7	24 in	30 in					3	WHITE	BLACK	BLACK	P-5 3	5.0	15.0
R3-8a	24 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	5.0	5.0
R7-1L	12 in	18 in					4	WHITE	RED	RED	P-5 4	1.5	6.0
R7-1R	12 in	18 in					4	WHITE	RED	RED	P-5 4	1.5	6.0
R10-5	30 in	36 in					1	WHITE	BLACK	BLACK	MOUNT ON MA	7.5	7.5
R10-11b	36 in	36 in					2	WHITE	BLACK	BLACK	MOUNT ON MA SHAFT	9.0	18.0
R10-12	30 in	36 in					1	WHITE	BLACK GREEN	BLACK	MOUNT ON MA	7.5	7.5
R10-15	30 in	30 in					1	YELLOW WHITE	BLACK RED	BLACK	MOUNT ON MA	6.25	6.25
R10-25	9 in	12 in					2	WHITE	BLACK	BLACK	MOUNT ON RRFB PUSHBUTTON	0.75	--
W11-2	30 in	30 in					3	FYG	BLACK	BLACK	P-5 3	6.25	18.75
W13-1	30 in	30 in					1	YELLOW	BLACK	BLACK	MOUNT W/ D3-1A	6.25	6.25
W16-7PL	24 in	12 in					4	FYG	BLACK	BLACK	MOUNT 2 W/ W11-2 2 ON RRFB	2.0	4.0 --
W16-7PR	24 in	12 in					2	FYG	BLACK	BLACK	MOUNT 2 ON RRFB	2.0	--
W16-9P	24 in	12 in					3	FYG	BLACK	BLACK	MOUNT 1 W/ W11-2 2 W/ S1-1L	2.0	6.0
W23-2	36 in	36 in					2	YELLOW	BLACK	BLACK	P-5 2	9.0	18.0
S1-1L	36 in	36 in					7	FYG	BLACK	BLACK	MOUNT 5 ON P-5 2 ON RRFB	9.0	45.0 --
S1-1R	36 in	36 in					2	FYG	BLACK	BLACK	MOUNT 2 ON RRFB	9.0	--
MA-S4-5bP	24 in	24 in		4C 4C 4C	3.5 2.5 2.5 3.5		1	FYG	BLACK	BLACK	MOUNT W/ S1-1L	4.0	4.0
S5-1	24 in	48 in		SEE 2009 MUTCD STANDARDS			1	YELLOW WHITE	BLACK	BLACK	MOUNT ON TS POST	8.0	--
S5-2	24 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	5.0	5.0

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK- GROUND	LEGEND	BORDER			
D3-1A	48 in	9 in		6B,3B	1.5 1.5	6" CITY SEAL	2	BLUE	WHITE	WHITE	P-5 1	--	--
D3-1B	40 in	9 in		6B,3B	1.5 1.5	6" CITY SEAL	4	BLUE	WHITE	WHITE	P-5 2	--	--
D3-1C	48 in	9 in		6B,3B	1.5 1.5	6" CITY SEAL	2	BLUE	WHITE	WHITE	MOUNT W/ D3-1B	--	--
D3-1D	48 in	9 in		5B,3B	1.5 1.5	6" CITY SEAL	2	BLUE	WHITE	WHITE	MOUNT W/ D3-1B	--	--

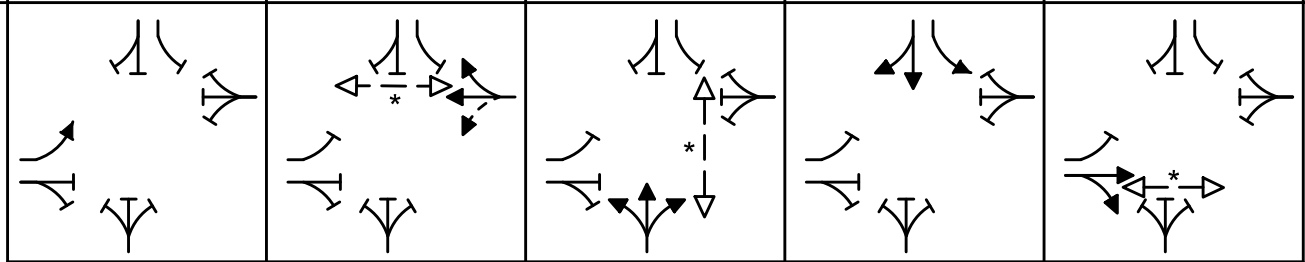
- NOTES:
- SIGNS TO BE MOUNTED ON RECTANGULAR RAPID FLASHING BEACON (RRFB) WILL BE PAID FOR UNDER SEPARATE ITEM 824.211.
 - SIGNS TO BE MOUNTED WITH FLASHING BEACON (S5-1 "SCHOOL SPEED LIMIT") WILL BE PAID FOR UNDER SEPARATE ITEM 824.451.
 - HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING CONFORMING TO SECTION M9:30.0, TYPE III OR IV, OF THE MASSDOT STANDARD SPECIFICATIONS SHALL BE USED FOR ALL SIGNS.
 - ALL P5 POSTS SHALL BE GALVANIZED, TELESCOPIC, RECTANGULAR TYPE POSTS, CONFORMING TO THE DIMENSIONS AND REQUIREMENTS OF THE MASSDOT "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS" (LATEST EDITION) AND CITY OF ATTLEBORO STANDARDS.
 - SEE THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" FOR THE LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR. (ALSO SEE SECTION M9.30.0 TYPE III MASSDOT STANDARD SPECIFICATION, THE "MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND "GUIDE SIGN POLICY FOR SECONDARY STATE HIGHWAYS" (LATEST EDITIONS) BY THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION).
 - ALL STREET NAME SIGNS SHALL BE PAINTED ONE SIDE AND SHALL USE TWO SIGNS MOUNTED BACK TO BACK WITH BOLT-THROUGH METHOD.
 - FYG: FLUORESCENT YELLOW GREEN

						DRAWN BY: TD	REGISTERED PROFESSIONAL	PREPARED BY	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO. 7157
						DESIGNED BY: TD		 www.BETA-Inc.com		NONE		ISSUE DATE 11/10/2021
						CHECKED BY: DF						SHEET NO. 22 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS								

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

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SEQUENCE AND TIMING FOR FULLY ACTUATED TRAFFIC SIGNAL CONTROL (COORDINATED)																		
PHASE			Ø1			Ø2			Ø3			Ø4			Ø6			FLASH
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	OPER.
THACHER STREET	EB	A,B	+G	+Y	+R	+R	+R	+R	+R	+R	+R	+R	+R	+R	+R	+R	+R	+FR
THACHER STREET	EB	C,D	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FY
THACHER STREET	WB	E,F,G	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FY
BLACK OAK DRIVE	NB	H,J	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
RATHBUN WILLARD DR	SB	L	+R	+R	+R	+R	+R	+R	+R	+R	+R	+G	+Y	+R	+R	+R	+R	+FR
RATHBUN WILLARD DR	SB	K,M	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
PEDESTRIAN	NB/SB	P1-P2	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	OFF
PEDESTRIAN	EB/WB	P3-P4	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
PEDESTRIAN	EB/WB	P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF
TIMING IN SECONDS																		
MINIMUM GREEN			5			10			6			6			10			EMERGENCY ONLY
VEHICLE EXTENSION			3			3			3			3			3			
MAXIMUM GREEN I (0600-1000 MON-FRI / 1000-1900 SAT-SUN)			14			64			17			16			87			
MAXIMUM GREEN II (1000-1600 MON-FRI)			5			56			17			23			70			
MAXIMUM GREEN III (ALL OTHER TIMES)			5			88			17			6			102			
CLEARANCE INTERVAL				4	5		4	5		3.5	2.5		3.5	1.5		4	5	EMERGENCY ONLY
WALK/CLEARANCE/BUFFER INTERVAL						7	11	4	7	7	4					7	5	4
DETECTOR MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
RECALL SWITCH			OFF			SOFT			OFF			OFF			SOFT			



* PEDESTRIAN PHASING UPON PUSHBUTTON ACTIVATION

TRAFFIC SIGNAL NOTES:

- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT TRAFFIC MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.
- FLASHING OPERATION IS FOR EMERGENCY OPERATION ONLY. THE SIGNAL SHALL PROVIDE STOP AND GO OPERATION 24 HOURS DAILY.
- PEDESTRIAN INDICATIONS TO BE ACTIVATED BY PEDESTRIAN PUSH-BUTTON ONLY.
- OPTICAL DETECTORS SHALL BE LOCATED FOR OPTIMUM SIGHT DISTANCE.
- PEDESTRIAN PUSHBUTTONS AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (FIG. 4E-4) AND POINTED PARALLEL TO THE CROSSWALK.

MAST ARM FOUNDATIONS

MAST ARM	ARM LENGTH	LOCATION		FOUNDATION SIZE		
		STATION	OFFSET	DIAMETER	DEPTH	VERT. BARS
MA-1	35'	19+93.3'	23.3' RT	3'-6"		
MA-2	15'	19+44.8'	29.8' LT	3'-6"		

- MAST ARM POLE FOUNDATION TO BE VERIFIED PENDING SOIL EXPLORATION.
- IF BEDROCK IS ENCOUNTERED BEFORE FOUNDATION DEPTH IS ACHIEVED, CONTRACTOR TO EXTEND FOUNDATION 5'-0" INTO COMPETENT ROCK, OR TO FOUNDATION DEPTH LISTED IN THE TABLE ABOVE, WHICHEVER IS GREATER.

EMERGENCY PREEMPTION NOTES:

- UPON PREEMPTION ACTIVATION, PHASE(S) BEING SERVICED SHALL IMMEDIATELY BEGIN CLEARANCE (I.E., YELLOW AND ALL RED) AS DESIGNED, EXCEPT FOR WHEN PHASE(S) CALLED BY PREEMPTION ARE CURRENTLY IN SERVICE. WHEN PHASE(S) CURRENTLY IN SERVICE MATCH PHASE(S) CALLED BY PREEMPTION, SIGNAL INDICATIONS ARE MAINTAINED. HOWEVER, PREEMPTION OPERATION (I.E. TIMING) SUPERCEDES NORMAL TRAFFIC SIGNAL CONTROL.
- AFTER THE PREEMPTION SEQUENCE HAS TERMINATED, THE SIGNAL SHALL RETURN TO THE BEGINNING OF Ø2 & Ø6.
- THE PREEMPTION STROBE SHALL BE ILLUMINATED ONLY WHEN THE PREEMPTED PHASE IS DISPLAYING A GREEN INDICATION.
- A SEPARATE CABLE SHALL BE RUN FOR THE PREEMPTION STROBE. IT MAY NOT BE RUN ON THE SPARE SIGNAL CABLE.
- EMERGENCY PREEMPTION SHALL COME ON A FIRST-COME FIRST-SERVED BASIS.

PRE-EMPTION PHASING & PRIORITY

RECEIVER AND PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
R1	1	EB	Ø1 & Ø6
R2	2	WB	Ø2
R3	3	SB	Ø4
R4	4	NB	Ø3

MASTER SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	FREE	FLASHING
MONDAY - FRIDAY	0600-1000	1000-1600	1600-2000	0000-0600 2000-2400	EMERGENCY ONLY
SATURDAY	1000-1900			0000-1000 1900-2400	EMERGENCY ONLY
SUNDAY	1000-1900			0000-1000 1900-2400	EMERGENCY ONLY

COORDINATION DATA

	PLAN 1	PLAN 2	PLAN 3
CYCLE LENGTH	140	130	145
OFFSET	25	114	25
SPLIT Ø1	23	14	14
SPLIT Ø2	73	65	97
SPLIT Ø3	23	23	23
SPLIT Ø4	21	28	11
SPLIT Ø6	96	79	111
COORDINATED PHASE	Ø2+Ø6	Ø2+Ø6	Ø2+Ø6

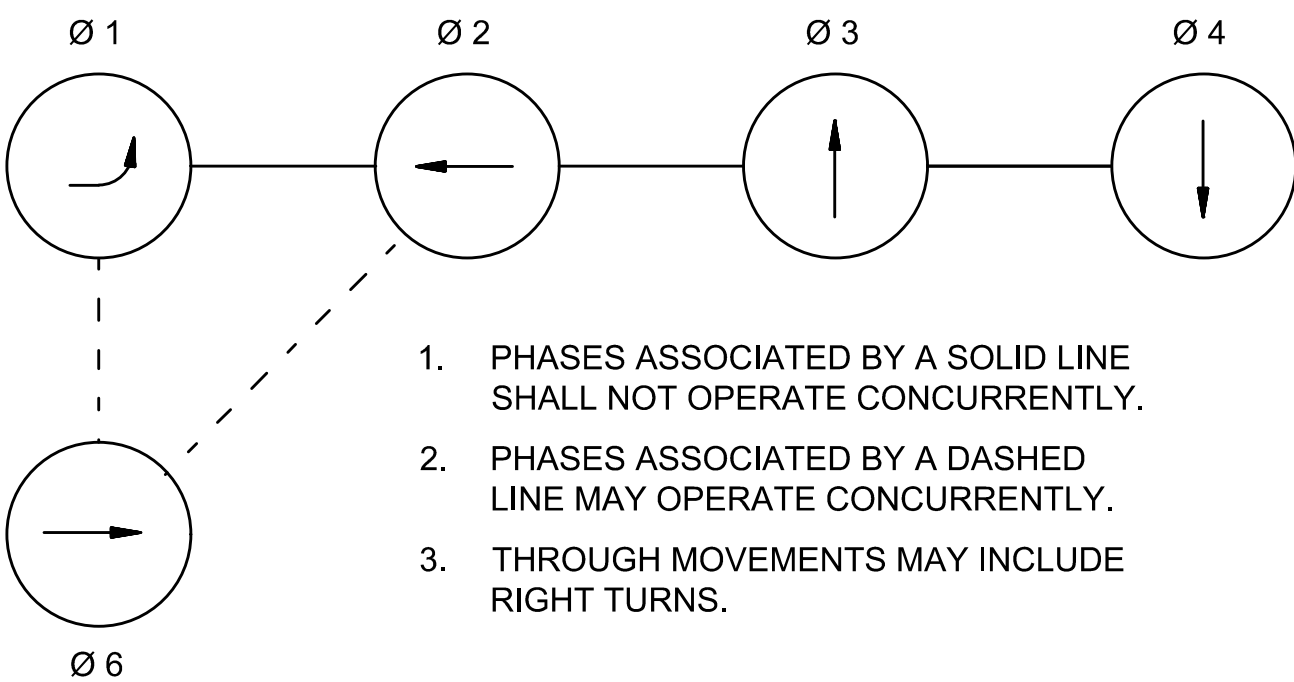
COORDINATION NOTES

- SHALL BE COORDINATED WITH COUNTY SQUARE VIA HARDWIRE TO STA 27+17± AND RADIO BROADBAND THEREAFTER.
- OFFSET TO BEGINNING OF Ø2+Ø6 (WB+EB) YELLOW.
- ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.
- PHASE 2 & 6 DETECTORS SHALL BE DISABLED DURING COORDINATION.
- COORDINATION MODE SHALL BE YIELD. FLOATING FORCE OFFS SHALL BE IN EFFECT DURING COORDINATION.
- INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
- OFFSET SEEKING SHALL BE THE SHORTWAY METHOD.

DETECTOR DATA

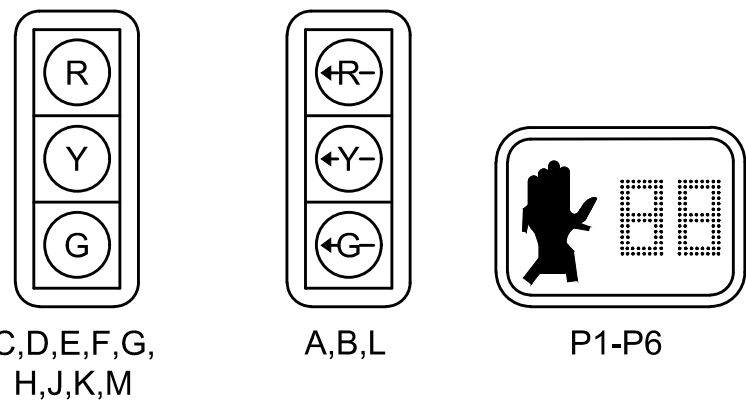
DETECTOR GROUP NO.	CAMERA NO.	NO. SECTION/ SIZE	OPERATIONS	CALL DELAY (SECONDS)	CALL PHASE	EXTEND PHASE
1	1	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø1	Ø1
2	1	1 - 6'x50'	PRESENCE	0	Ø1	Ø1
3	1	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø6	Ø6
4	1	1 - 6'x50'	PRESENCE	0	Ø6	Ø6
5	2	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø2	Ø2
6	2	1 - 6'x50'	PRESENCE	0	Ø2	Ø2
7	3	1 - 6'x25'	PRESENCE/BICYCLE	0	Ø3	Ø3
8	4	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø4	Ø4
9	4	1 - 6'x50'	PRESENCE	0	Ø4	Ø4
10	4	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø4	Ø4
11	4	1 - 6'x50'	PRESENCE	0	Ø4	Ø4

NEMA DUAL RING PHASING NOTES:



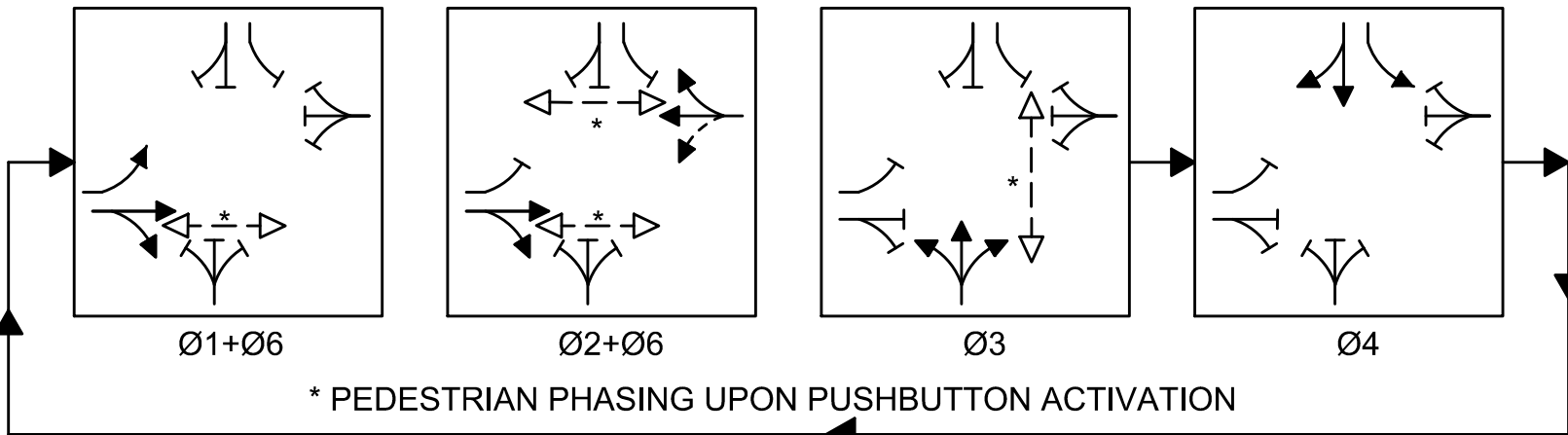
- PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
- PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
- THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.

SIGNAL HEAD DESIGNATIONS



SIGNAL HEAD NOTES

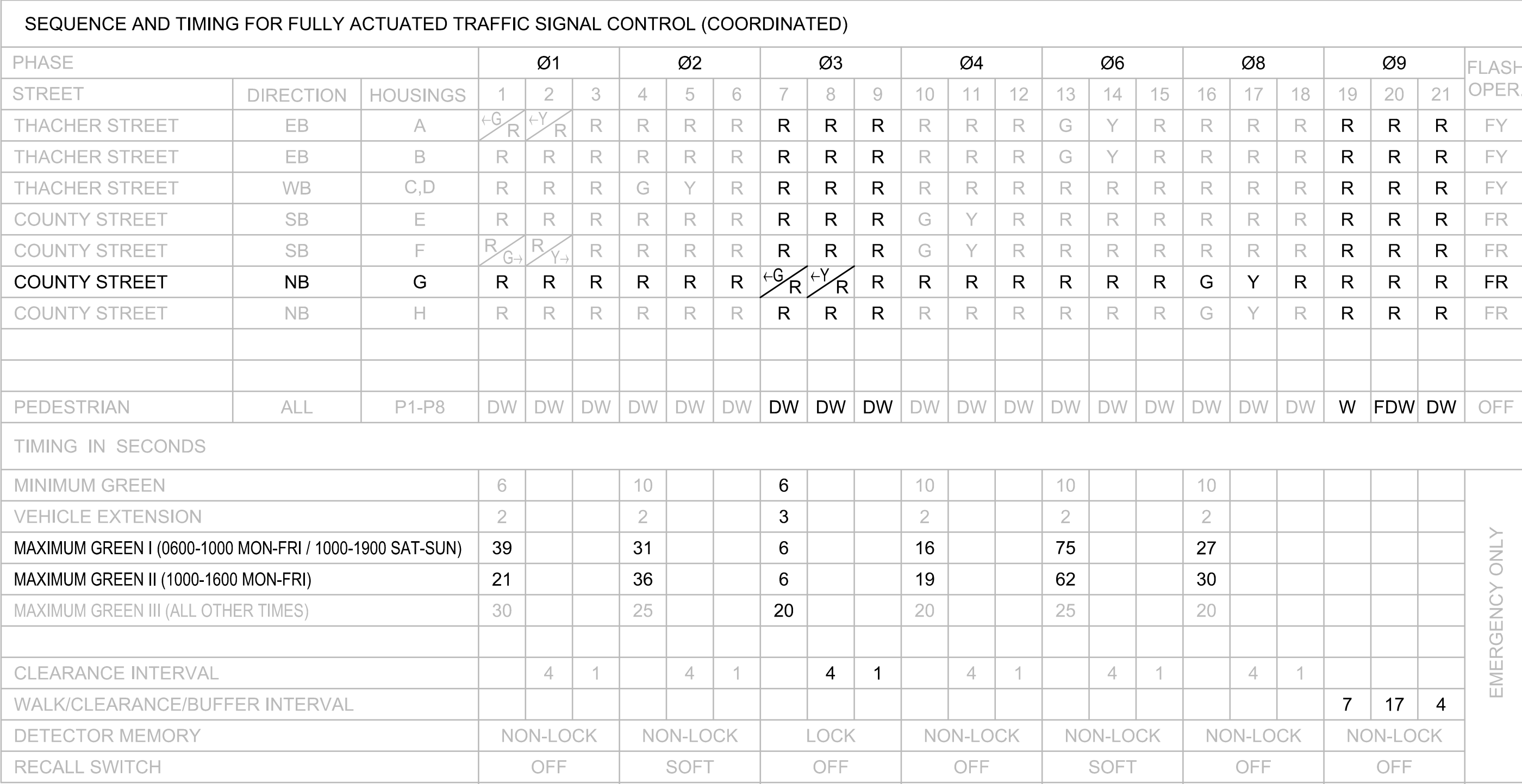
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES AND TUNNEL VISORS.
- ALL SIGNAL BACKPLATES SHALL BE 5" LOUVERED WITH 3" YELLOW RETROREFLECTIVE BORDER.
- ALL SIGNAL LENSES SHALL BE 12" DIA. LED.
- ALL PEDESTRIAN SIGNAL HEADS SHALL DISPLAY INTERNATIONAL SYMBOLS - (HAND)/(PERSON WALKING) WITH COUNTDOWN DISPLAYS.
- ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE 16" LED LENSES AND SUN VISORS.
- ALL SIGNAL HEADS SHALL BE FIXED MOUNTED.



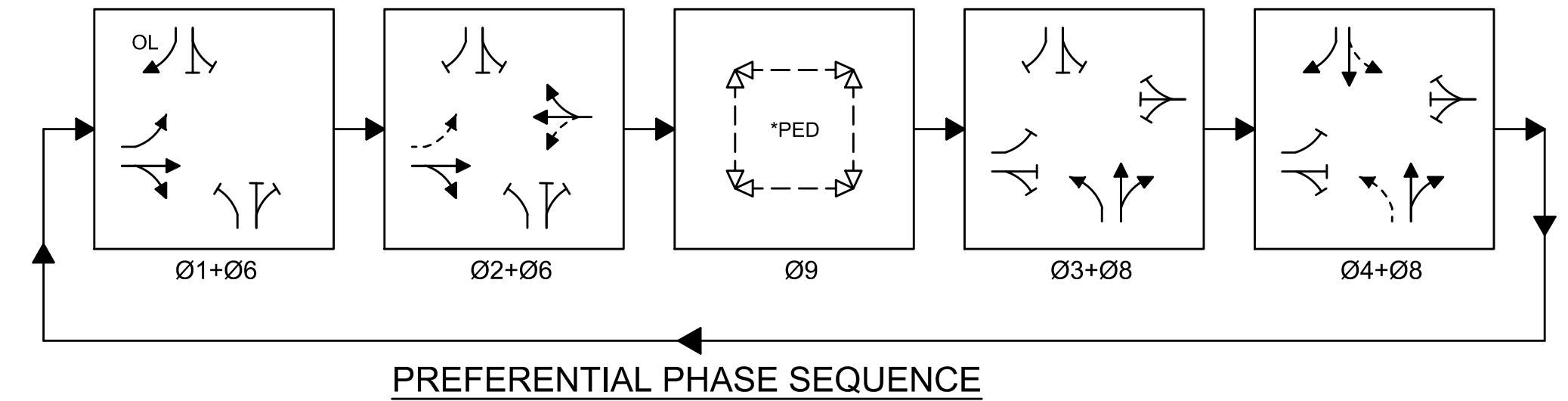
* PEDESTRIAN PHASING UPON PUSHBUTTON ACTIVATION

PREFERENTIAL PHASE SEQUENCE

						DRAWN BY: TD/LF	REGISTERED PROFESSIONAL	PREPARED BY	SUBCONSULTANT	SCALE AS SHOWN	TITLE Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TRAFFIC SIGNAL DATA SHEET	BETA JOB NO. 7157
						DESIGNED BY: TD						ISSUE DATE 11/10/2021
						CHECKED BY: DF						SHEET NO. 24 of 28
NUMBER	DATE	MADE BY	CHECKED BY			REVISIONS						



* UPON PUSHBUTTON ACTIVATION




MAJOR ITEMS (COUNTY SQUARE)		
ITEM NO.	QUANTITY	DESCRIPTION
816.02	1	TRAFFIC SIGNAL CONTROLLER (ATC NEMA)
	1	TRAFFIC SIGNAL CONTROLLER (ATC NEMA) - MASTER
	4	VIDEO DETECTION CAMERA WITH RADAR
	2	VIDEO PROCESSOR (2 CHANNEL)
	1	9" VIDEO MONITOR
	1	WIRELESS BROADBAND RADIO
	1	8-PORT ETHERNET SWITCH
	1	SIGNAL HEAD, 1-WAY, 5 SECTION, 12" LENSES
	1	5" 5-SECTION BACKPLATE WITH 3" YELLOW RETROREFLECTIVE YELLOW BORDER
PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.		

1. RETAIN ALL EXISTING TRAFFIC SIGNAL EQUIPMENT, PAVEMENT MARKINGS, AND SIGNS, UNLESS OTHERWISE NOTED ON PLAN.
2. INFORMATION BASED ON AERIAL IMAGERY. ALL PROPOSED AND EXISTING LOCATIONS SHALL BE VERIFIED BY FIELD ENGINEER.

DETECTOR GROUP NO.	CAMERA NO.	NO. SECTION/ SIZE	OPERATIONS	CALL DELAY (SECONDS)	CALL PHASE	EXTEND PHASE
①	1	1 - 6'x20'	PRESENCE/BICYCLE	0	Ø1	Ø1
②	1	1 - 6'x50'	PRESENCE	0	Ø1	Ø1
③	1	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø6	Ø6
④	1	1 - 6'x50'	PRESENCE	0	Ø6	Ø6
⑤	2	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø2	Ø2
⑥	2	1 - 6'x50'	PRESENCE	0	Ø2	Ø2
⑦	3	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø4	Ø4
⑧	3	1 - 6'x50'	PRESENCE	0	Ø4	Ø4
⑨	3	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø4	Ø4
⑩	3	1 - 6'x50'	PRESENCE	0	Ø4	Ø4
⑪	4	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø9	Ø8+Ø9
⑫	4	1 - 6'x50'	PRESENCE	0	Ø9	Ø8+Ø9
⑬	4	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø8	Ø8
⑭	4	1 - 6'x50'	PRESENCE	0	Ø8	Ø8

1. SHALL BE COORDINATED WITH RATHBUN-WILLARD DRIVE VIA RADIO BROADBAND TO STA 27+17± AND HARDWIRE THEREAFTER.
2. OFFSET TO BEGINNING OF Ø2+Ø6 (WB+EB) YELLOW.
3. ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.
4. PHASE 2 & 6 DETECTORS SHALL BE DISABLED DURING COORDINATION.
5. COORDINATION MODE SHALL BE YIELD. FLOATING FORCE OFFS SHALL BE IN EFFECT DURING COORDINATION.
6. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
7. OFFSET SEEKING SHALL BE THE SHORTWAY METHOD.

	PLAN 1	PLAN 2	PLAN 3	FREE	FLASHING
MONDAY - FRIDAY	0600-1000	1000-1600	1600-2000	0000-0600 2000-2400	EMERGENCY ONLY
SATURDAY	1000-1900			0000-1000 1900-2400	EMERGENCY ONLY
SUNDAY	1000-1900			0000-1000 1900-2400	EMERGENCY ONLY

					DRAWN BY:	REGISTERED PROFESSIONAL	PREPARED BY:	SUBCONSULTANT	SCALE	TITLE	BETA JOB NO. 7157			
					TD/LF		 www.BETA-Inc.com		AS SHOWN	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TRAFFIC SIGNAL PLAN	ISSUE DATE 11/10/2021			
					DESIGNED BY:									
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					CHECKED BY:						SHEET NO. 25 of 28			
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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS										

NOTES:

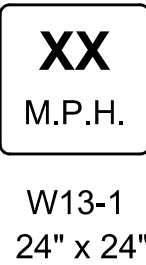
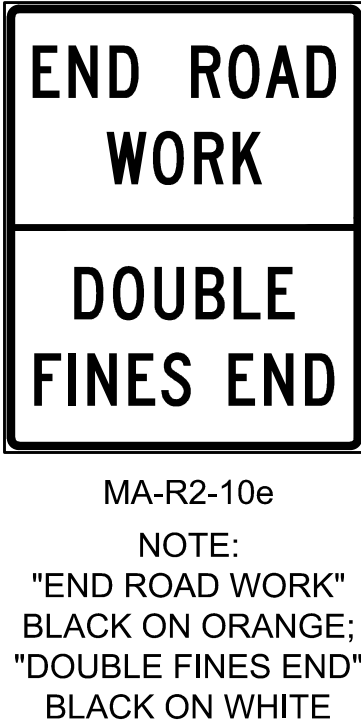
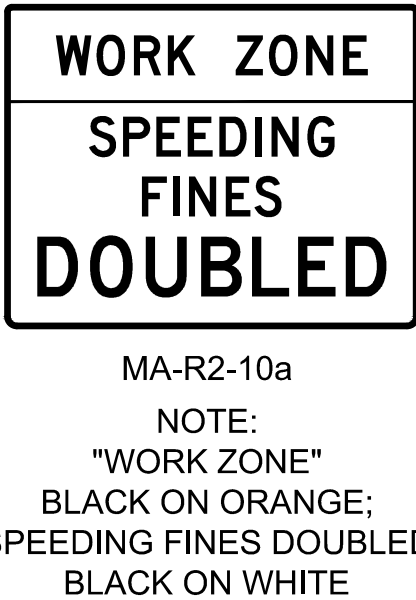
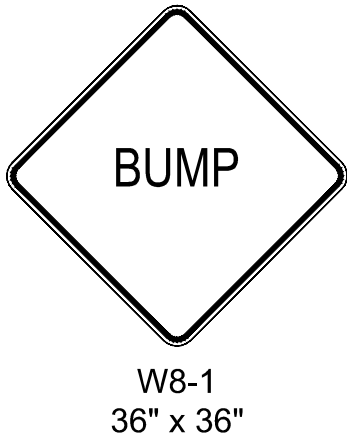
1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE WITH MASSDOT SPECIFICATIONS.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
7. THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
13. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".

LEGEND:

- REFLECTORIZED PLASTIC DRUM
- TYPE III BARRICADE
- FLASHING ARROW PANEL
- FLASHING ARROW PANEL
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN
- P

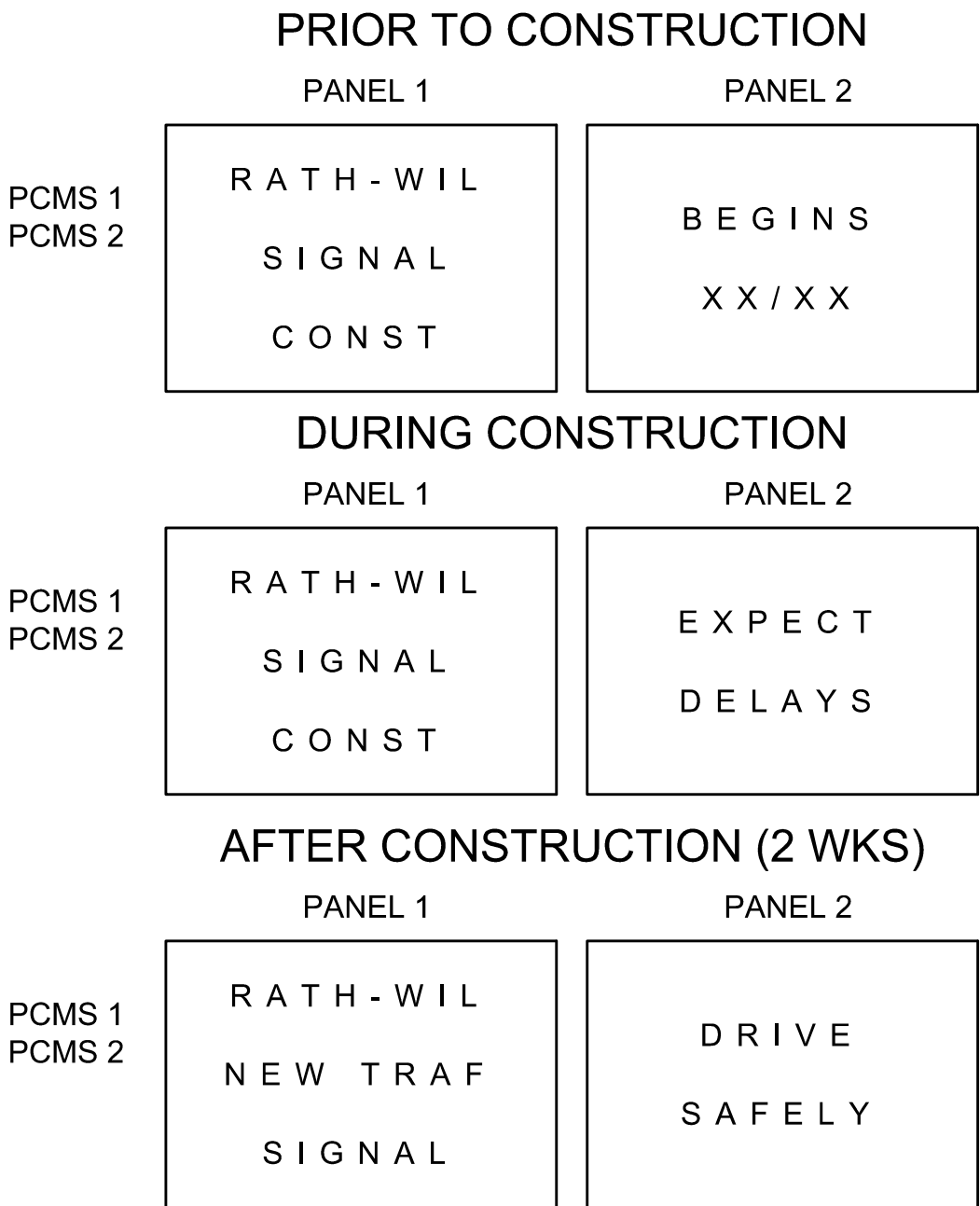
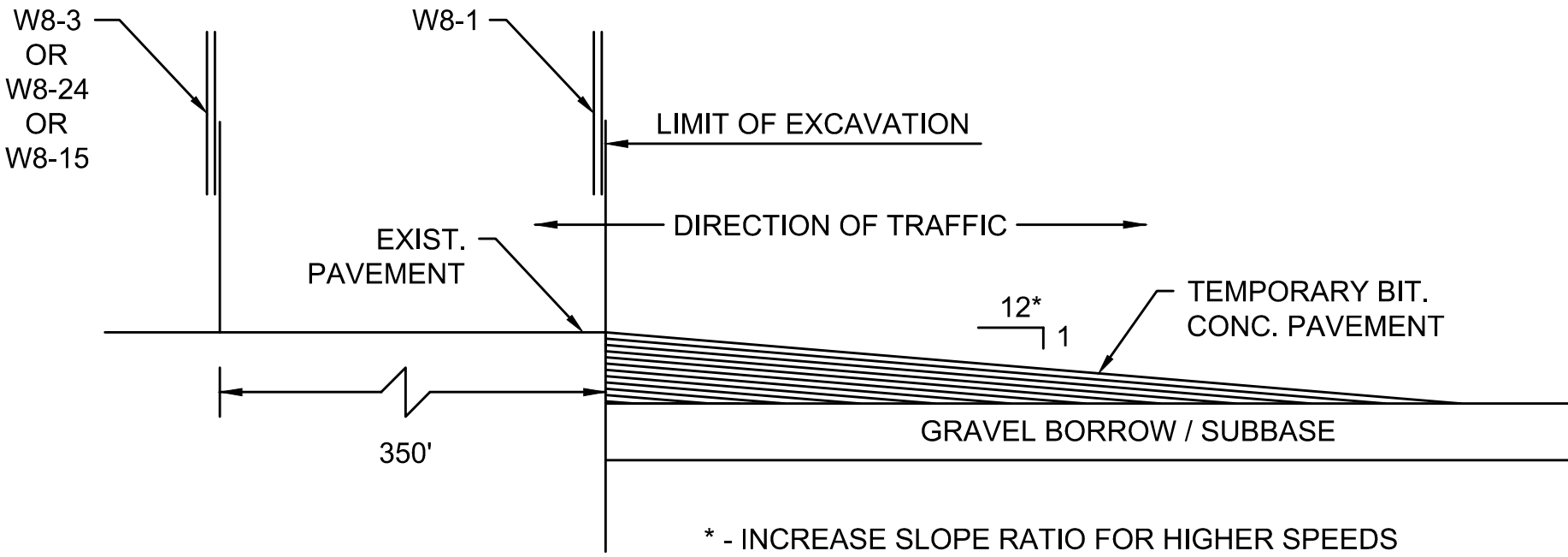
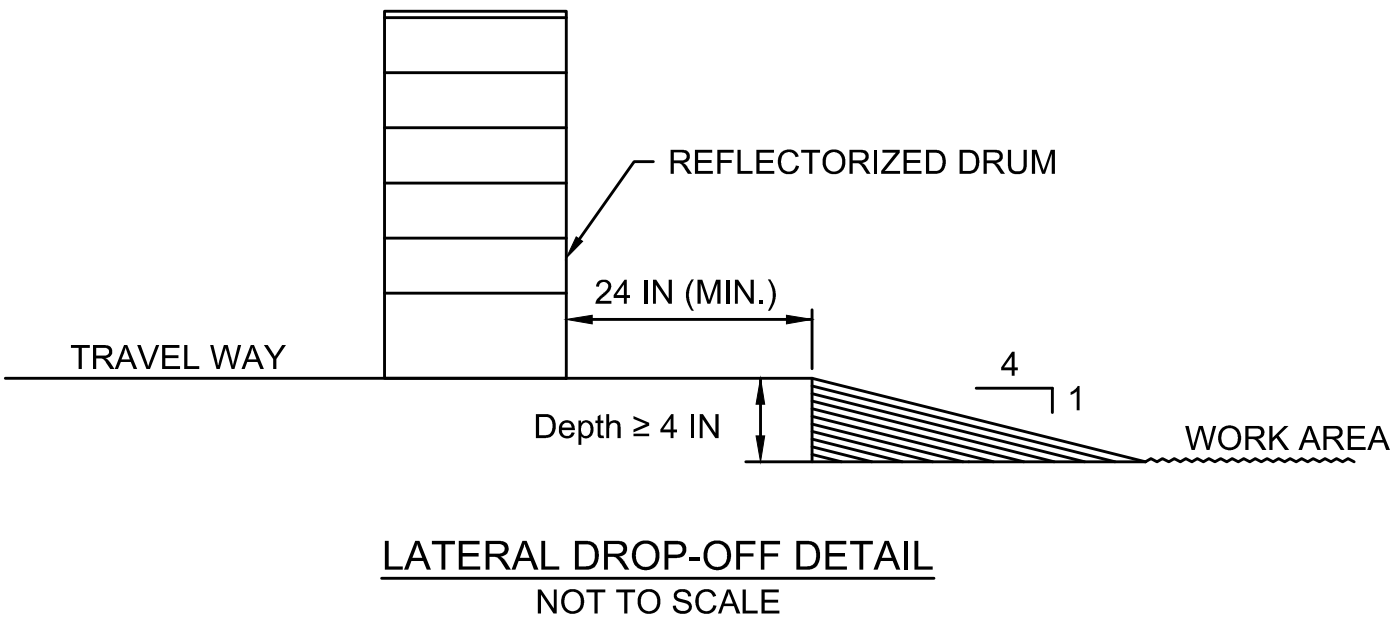
POLICE DETAIL
- F

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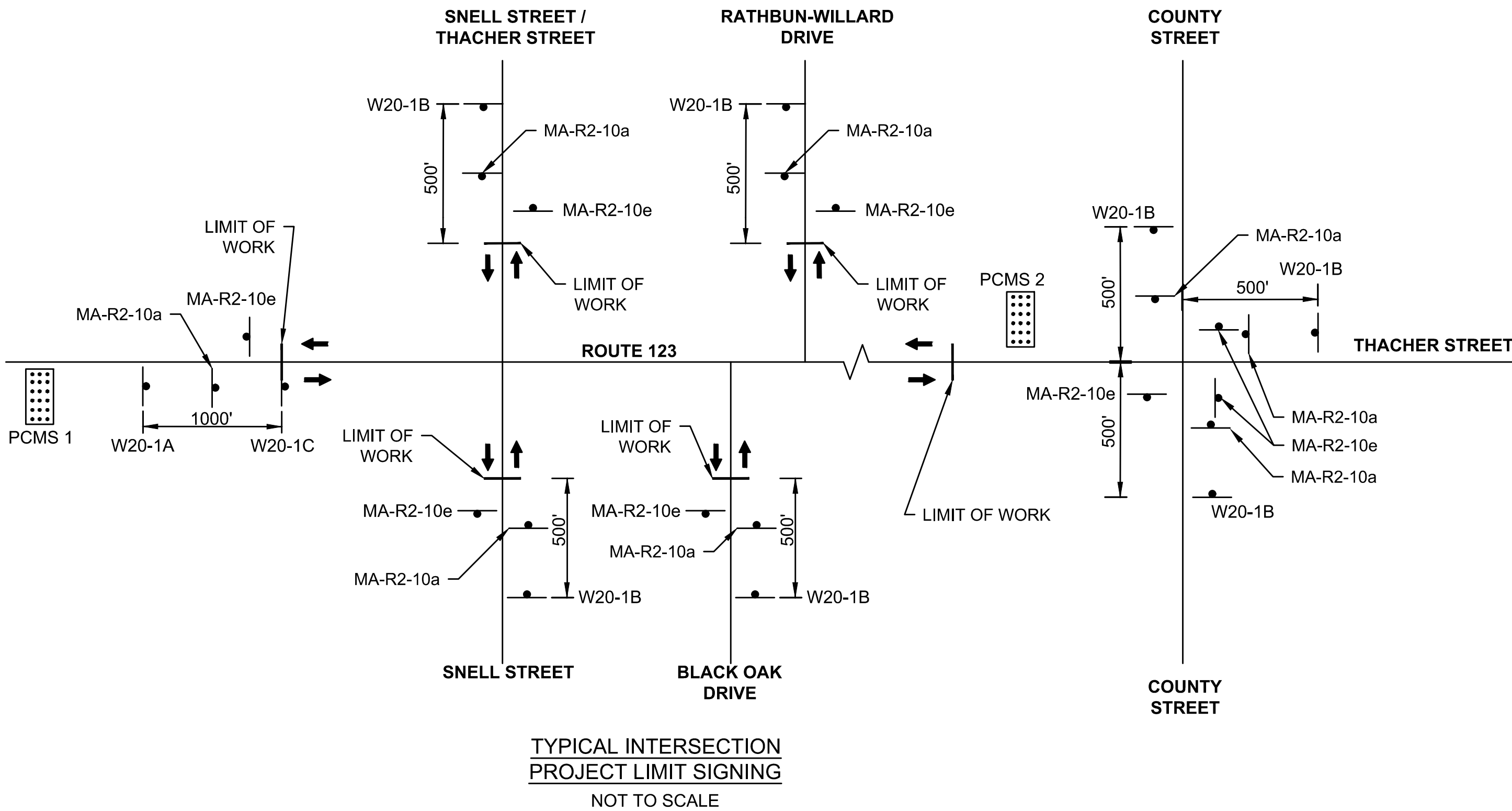


TAPER LENGTH

SPEED LIMIT	FORMULA
40 MPH or Less	$L = WS^2/60$
45 MPH or Greater	$L = W \times S$
L = TAPER LENGTH IN FEET W = WIDTH OF OFFSET IN FEET S = POSTED SPEED IN MPH	



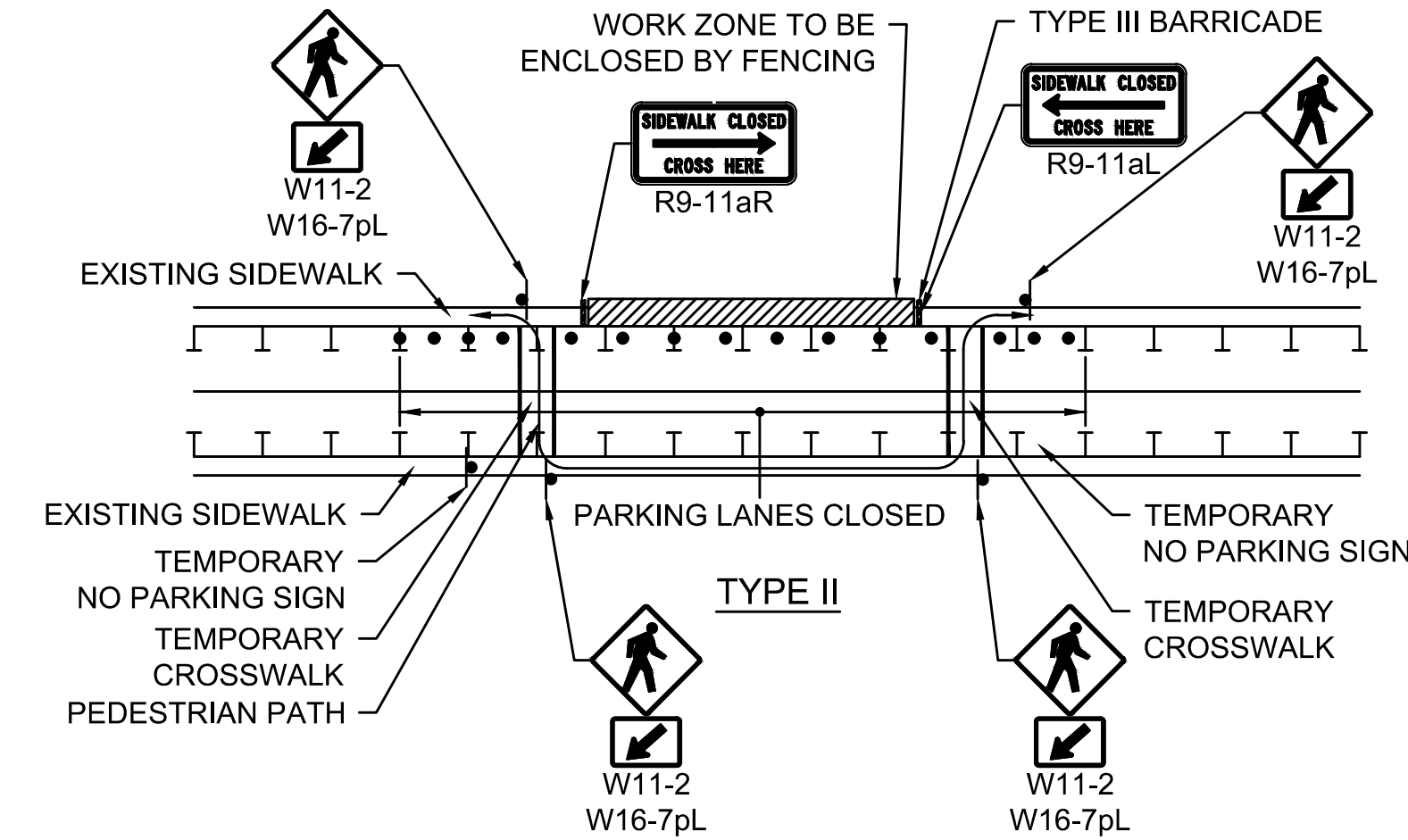
- NOTES:
1. INSTALL PCMS TWO WEEKS PRIOR TO CONSTRUCTION TO INFORM MOTORISTS OF UPCOMING WORK.
2. PCMS SHALL BE ACTIVE FOR THE DURATION OF WORK.



CONSTRUCTION SIGNS
NOT TO SCALE

					DRAWN BY: TD	REGISTERED PROFESSIONAL	PREPARED BY	SUBCONSULTANT	SCALE NONE	TITLE Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TEMPORARY TRAFFIC CONTROL PLAN	BETA JOB NO. 7157
					DESIGNED BY: TD						ISSUE DATE 11/10/2021
					CHECKED BY: DF						SHEET NO. 26 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS							

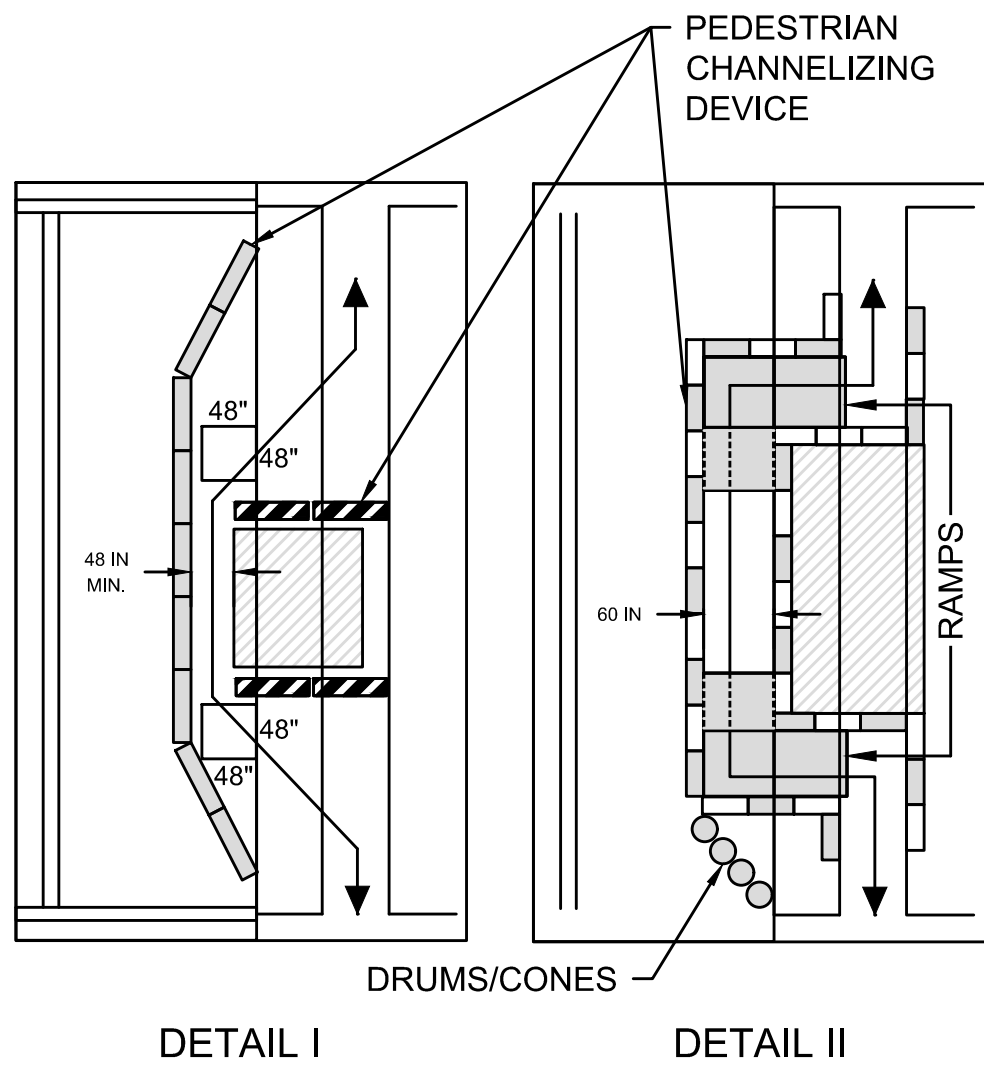
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NOTES:

1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE.

PEDESTRIAN BYPASS DETAILS
NOT TO SCALE

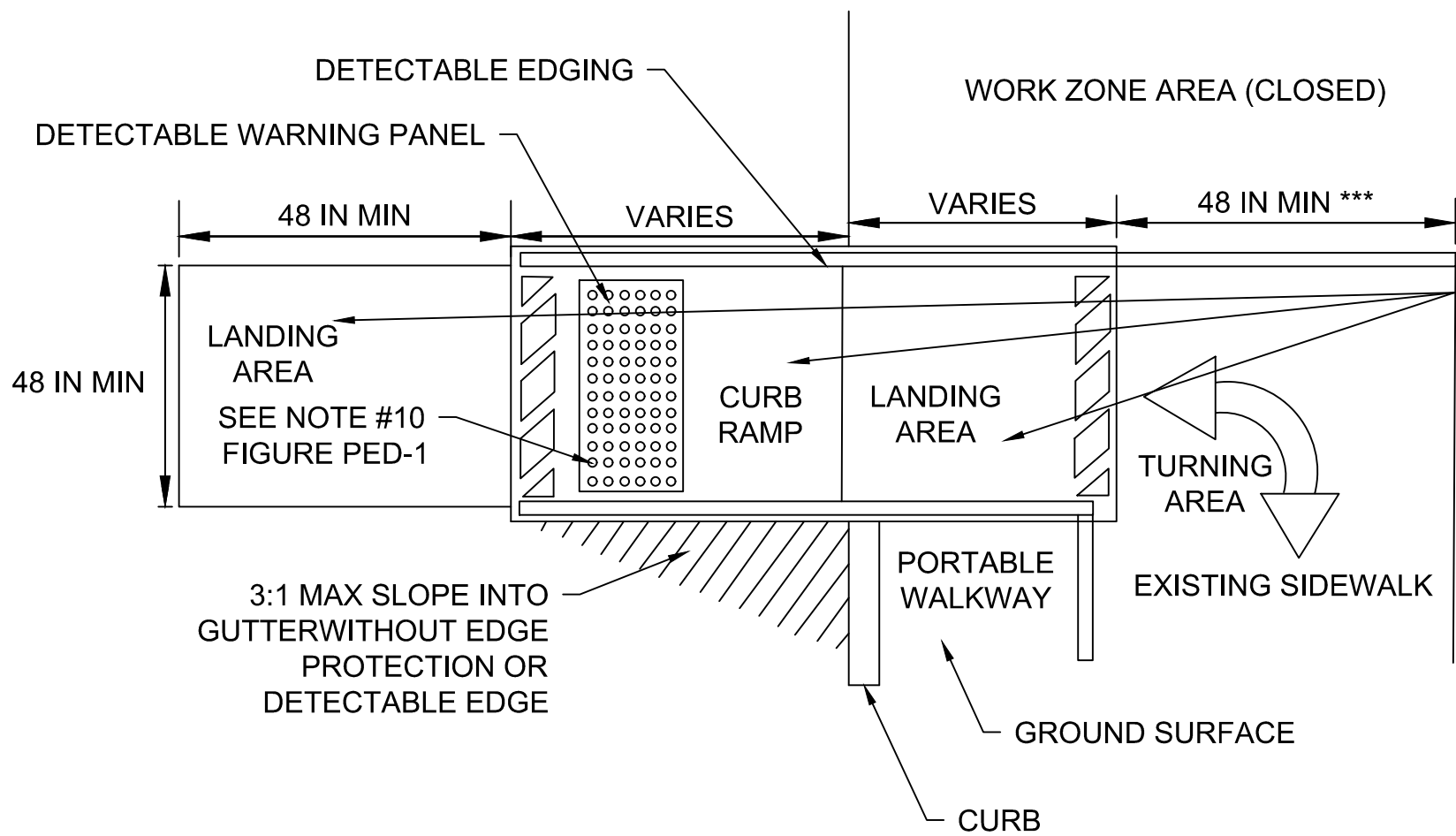


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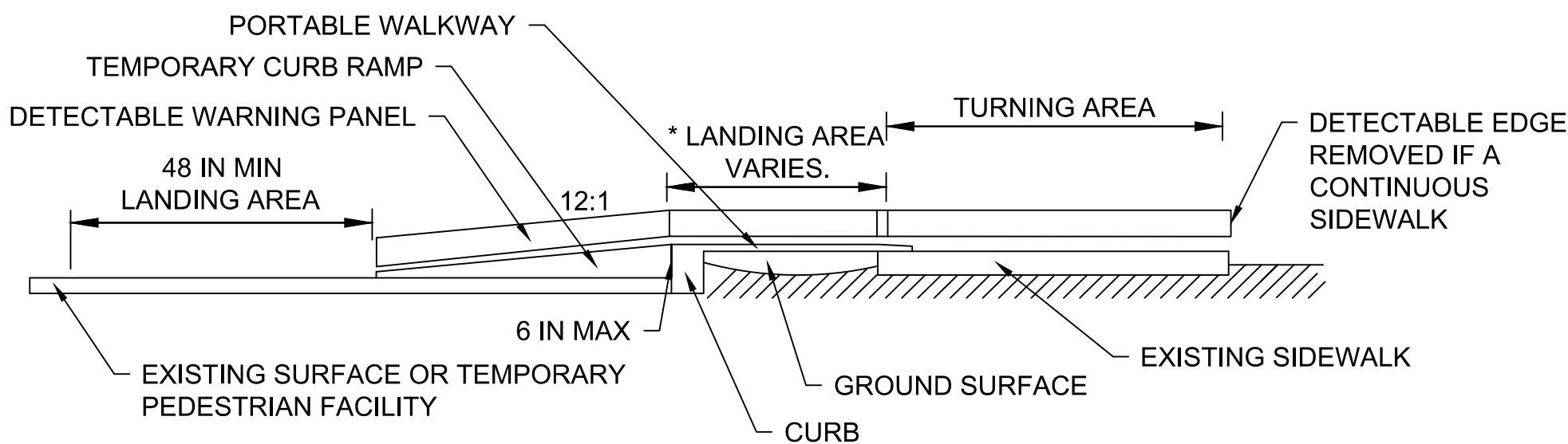
- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONEL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB COMPLIANT DEVICES. IF A SIDEWALK CLOSURE OR RESTRICTION LASTS FOR MORE THAN ONE (1) WORK SHIFT THEN ADA/AAB COMPLIANCE SHALL BE FOLLOWED.
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (SEE FIGURES).
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXCEEDS 200 FEET THEN A 5 FOOT BE 5 FOOT PASSING ZONE SHALL BE PROVIDED.
- THE PROTECTIVE REQUIREMENTS OF A TTC WORK ZONE MAY HAVE AN IMPACT IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN PROVIDING PEDESTRIAN DELINEATION SHOULD BE BASED ON ENGINEERING JUDGMENT .
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DETERMINED BY THE ENGINEER.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- EXISTING AUDIBLE DEVICES NO LONGER APPLICABLE DUE TO CONSTRUCTION SHALL BE DISABLED.

AUDIBLE DEVICES:

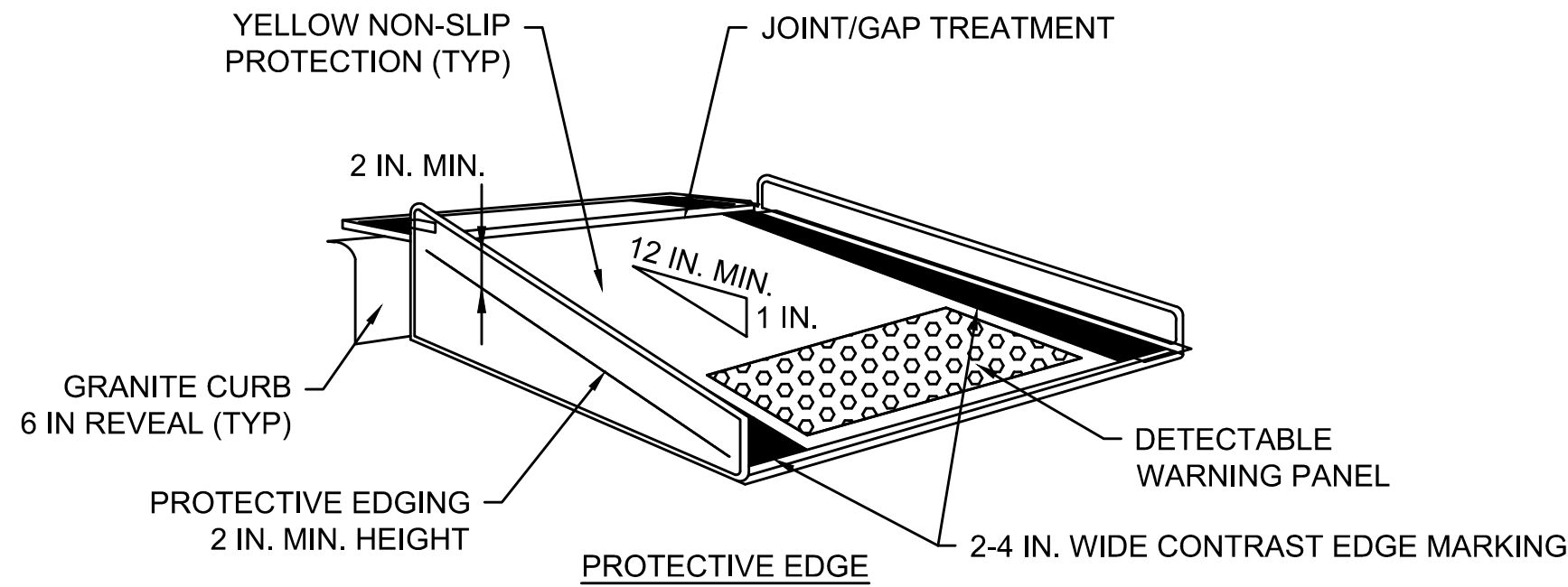
- FOR LONG TERM SIDEWALK CLOSURES (AT A MINIMUM OVERNIGHT) A FORM OF SPEECH MESSAGING FOR PEDESTRIANS WITH VISUAL DISABILITIES SHALL BE PROVIDED. AUDIBLE INFORMATION DEVICES SUCH AS DETECTABLE BARRIERS OR BARRICADES AND OTHER PASSIVE PEDESTRIAN ACTIVATION (MOTION ACTIVATED) DEVICES SHOULD BE CONSIDERED FOR THESE CASES. THESE AUDIBLE DEVICES CAN BE MOUNTABLE OR STAND ALONE.



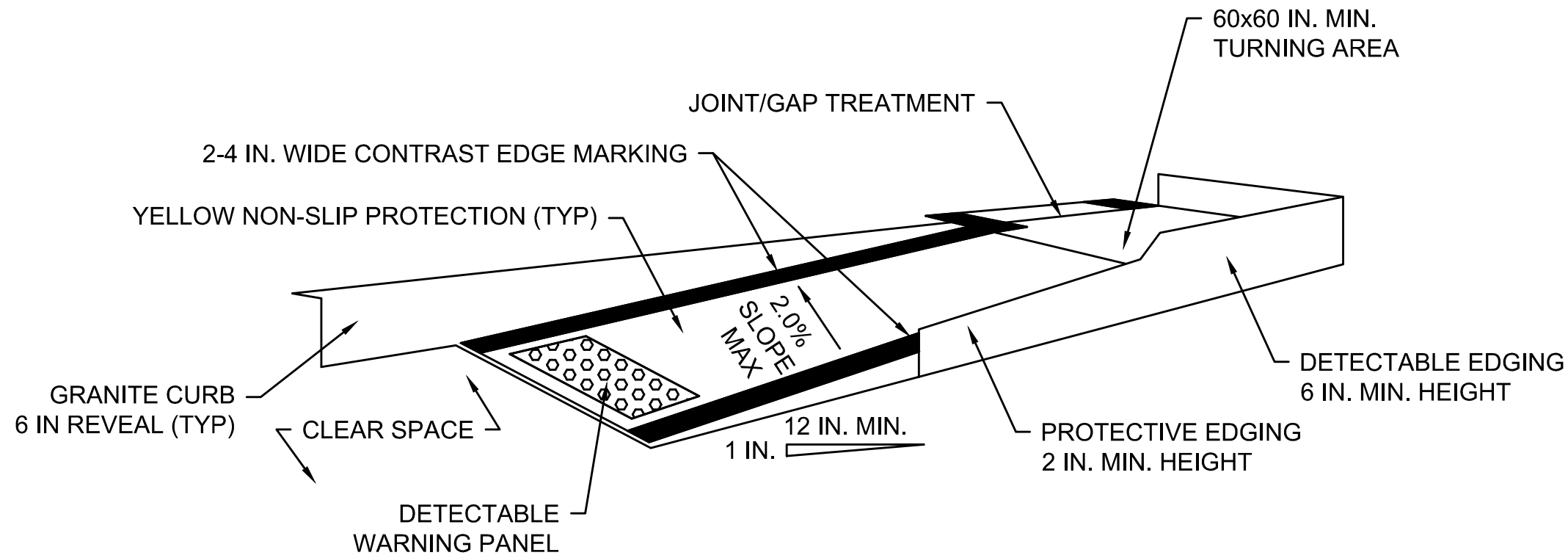
- * LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.
- ** DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.
- *** 60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK



TEMPORARY CURB RAMP
NOT TO SCALE



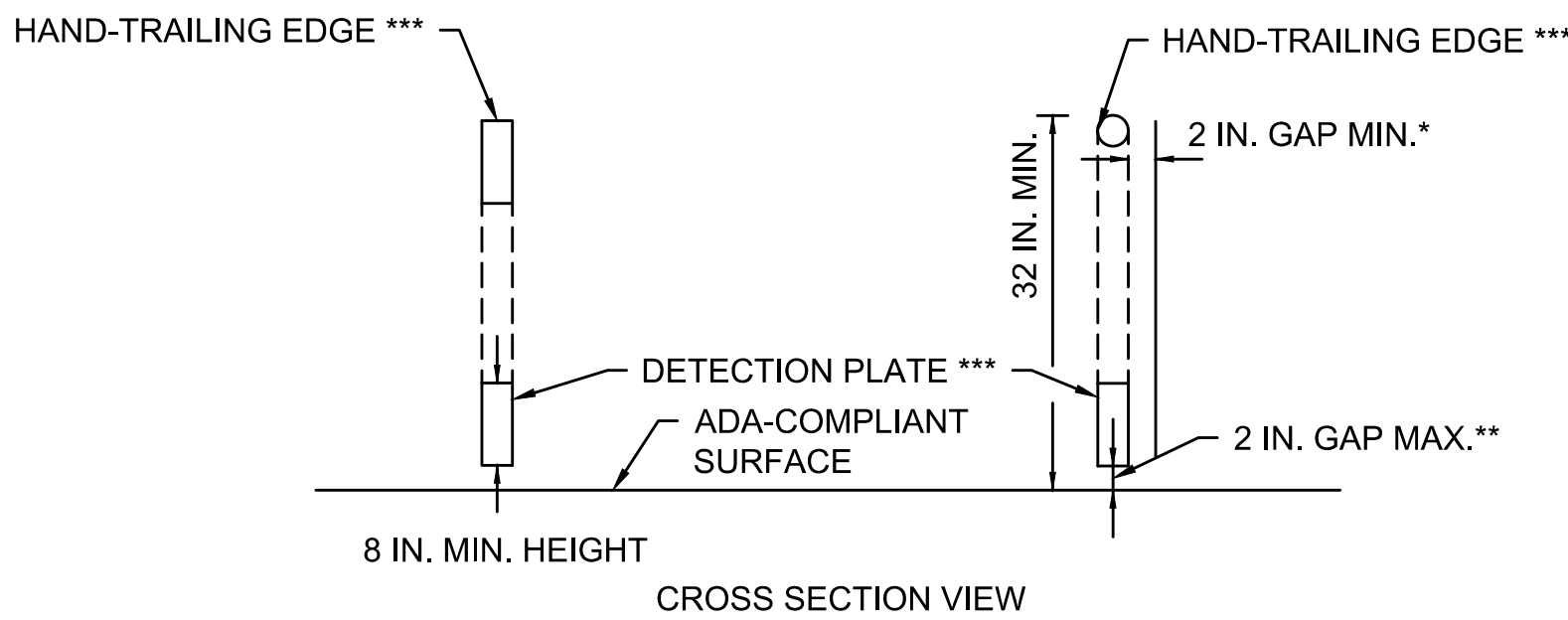
TEMPORARY CURB RAMP-PERPENDICULAR TO CURB
NOT TO SCALE



TEMPORARY CURB RAMP-PARALLEL TO CURB
NOT TO SCALE

NOTES:

1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
5. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
6. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
10. IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.



PEDESTRIAN CHANNELIZING DEVICE
NOT TO SCALE

NOTES:

- * THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND-TRAILING EDGE AND ITS SUPPORT.
- ** A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURFACE MAY BE USED TO PROVIDE DRAINAGE.
- *** THE HAND-TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:	TD
DESIGNED BY:	TD
CHECKED BY:	DF

REGISTERED PROFESSIONAL	PREPARED BY



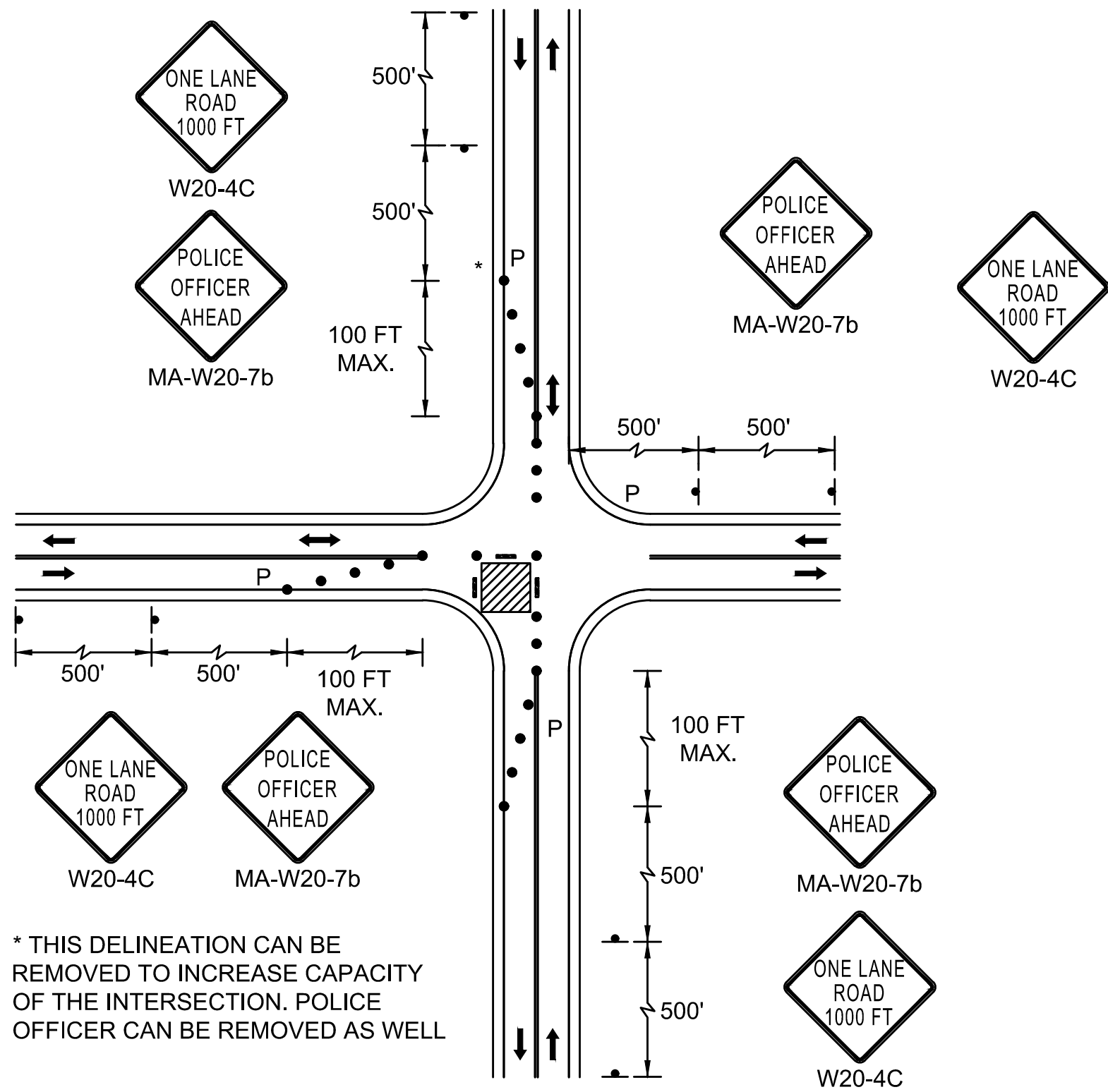
SUBCONSULTANT	
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SCALE	NONE
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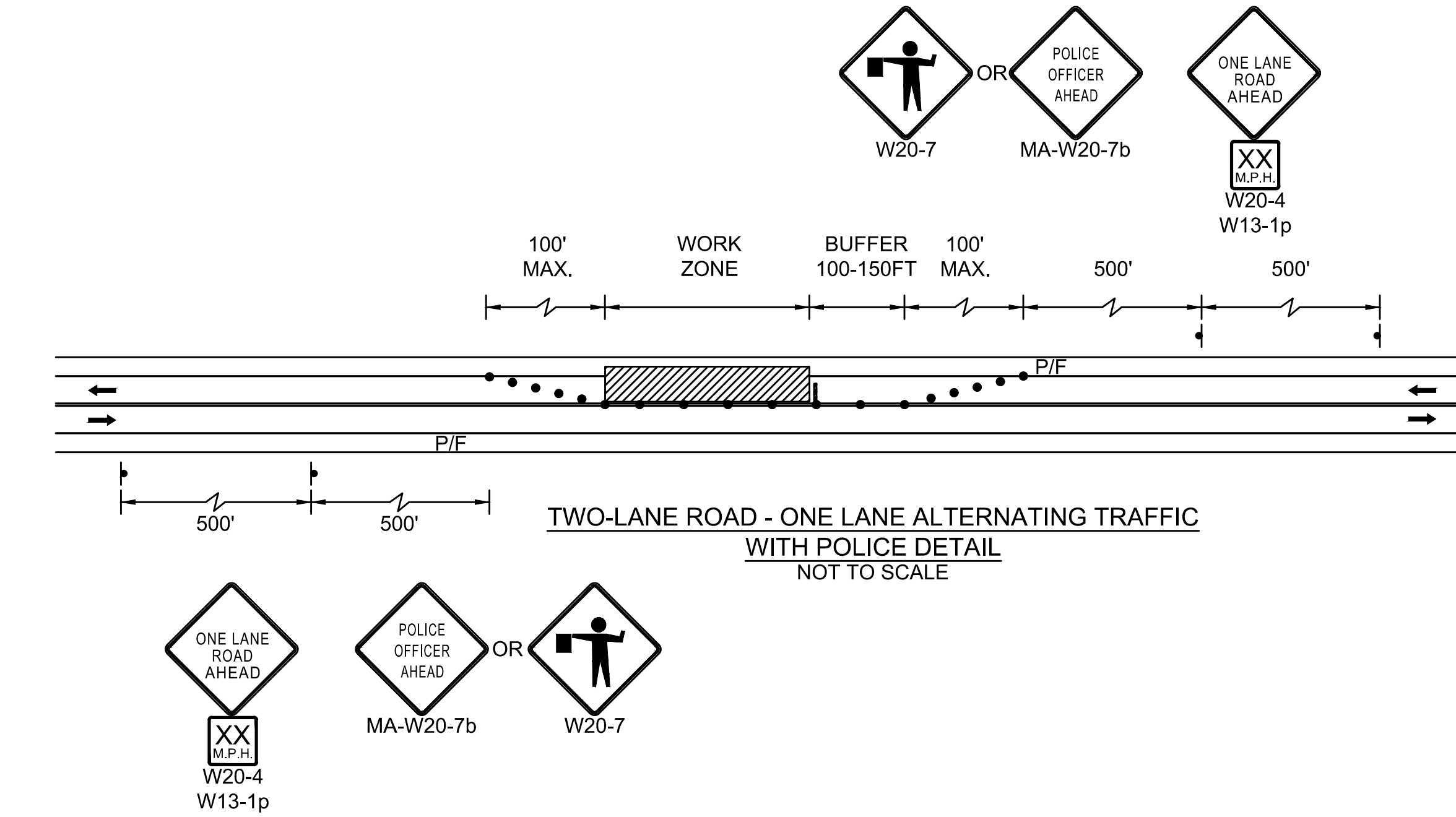
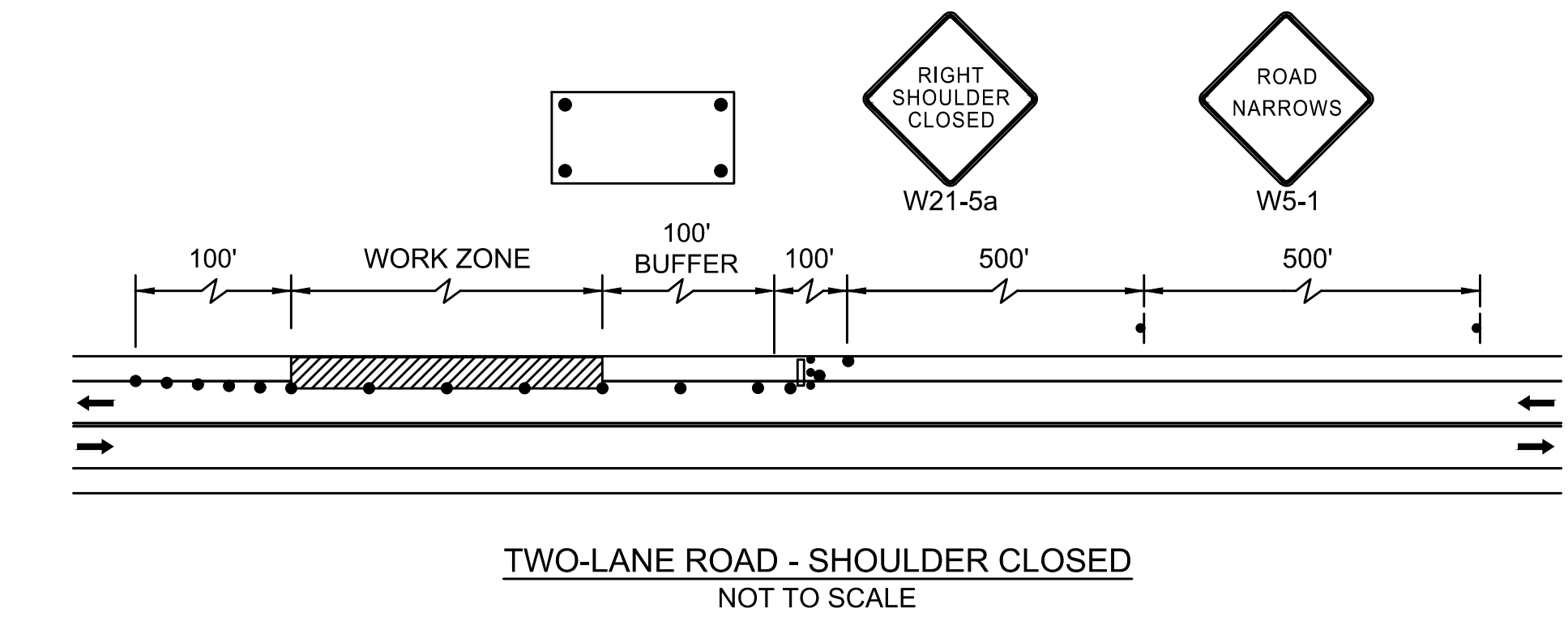
TITLE	Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TEMPORARY TRAFFIC CONTROL PLAN
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BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	27 of 28

1/11/2022 8:07 PM C:\710057157-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANSET\7157 TMP.DWG (MADOT-D.STB)



INTERSECTION WITH LANE CLOSURE
NOT TO SCALE



SAFETY SIGNING FOR CONSTRUCTION OPERATIONS

SAFETY SIGNING FOR CONSTRUCTION OPERATIONS								
LEGEND	TYPE	SIZE	COLOR			UNIT AREA	NO. SIGNS	TOTAL AREA
			BACKGROUND	LEGEND	BORDER			
WORK ZONE SPEEDING FINES...	MA-R2-10a	48" x 36"	WHITE/ORANGE**	BLACK	BLACK	12 SF	8	96 SF
END ROAD WORK	MA-R2-10e	36" x 48"	WHITE/ORANGE**	BLACK	BLACK	12 SF	8	96 SF
SIDEWALK CLOSED CROSS HERE	R9-11a	48" x 24"	WHITE	BLACK	BLACK	8 SF	2	16 SF
ROAD NARROWS	W5-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
BUMP	W8-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
PAVEMENT ENDS	W8-3	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
GROOVED PAVEMENT	W8-15	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
STEEL PLATE AHEAD	W8-24	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
PEDESTRIAN	W11-2	30" x 30"	FYG***	BLACK	BLACK	6.3 SF	2	12.6 SF
ADVISORY SPEED	W13-1	24" x 24"	ORANGE**	BLACK	BLACK	4 SF	2	8 SF
DOWNWARD LEFT DIAGONAL ARROW	W16-7pL	24" x 12"	FYG***	BLACK	BLACK	2 SF	2	4 SF
ROAD WORK 1000 FT	W20-1A	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
ROAD WORK 500 FT	W20-1B	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	7	63 SF
ROAD WORK AHEAD	W20-1C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	1	9 SF
ONE LANE ROAD AHEAD	W20-4	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
ONE LANE ROAD 1000 FT	W20-4C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
FLAGGER	W20-7	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
POLICE OFFICER AHEAD	MA-W20-7b	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
RIGHT SHOULDER CLOSED	W21-5aR	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
SQUEEZE RIGHT	MA-W30-8R	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
* NO. OF SIGNS ARE ESTIMATED FOR BIDDING PURPOSES ONLY						TOTAL AREA OF SIGNS:		521 SF

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:	TD
DESIGNED BY:	TD
CHECKED BY:	DF

REGISTERED PROFESSIONAL

PREPARED BY



SUBCONSULTANT

SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE

Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
TEMPORARY TRAFFIC CONTROL PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. 28 of 28